



Lancaster Laboratories Sample No. SW 4542506

OU4-SS-04-COMP6(0-1) Soil Sample

RAL DePue Site

Collected: 06/03/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 13:57

Discard: 07/31/2005

Blasland, Bouck & Lee

6723 Towpath Road, Box 66

Syracuse NY 13214-0066

SS461 SDG#: DPU06-13

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 12.5 | 1.07 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 6.9 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.0 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|--------|------------------------|--------------------|-----------------|
| 06935 | Arsenic | SW-846 6010B | 1 | 06/18/2005 12:17 | Damary Valentin | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/15/2005 07:58 | William C Schwebel | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/15/2005 00:10 | Daniel S Smith | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 06/15/2005 07:00 | Suzette L Lehman | 1 |

8825



Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681



Lancaster Laboratories Sample No. SW 4542507

OU4-SS-04-COMP6(1-6) Soil Sample

RAL DePue Site

Collected: 06/03/2005

Account Number: 11594

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6723 Towpath Road, Box 66

Discard: 07/31/2005

Syracuse NY 13214-0066

SS462 SDG#: DPU06-14*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0889 J | 0.115 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 12,800. | 23.0 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 43,700. | 34.6 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 17,700. J | 23.0 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 27,100. | 28.8 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 2,000. J | 57.6 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 99.5 J | 115. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.15 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 10.0 J | 1.15 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.15 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.91 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 577. J | 11.5 | mg/kg | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.667 | 0.346 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 23.9 J | 2.30 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 25.8 J | 4.61 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.55 | 5.76 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 47.8 J | 4.61 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 233. J | 11.5 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 956. J | 2.30 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 18.5 | 5.76 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.614 J | 2.30 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 32.1 J | 2.30 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,000. J | 11.5 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 13.2 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.4 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Analysis Trial# | Date and Time | Analyst | 0026 Dilution Factor |
|---------|---------------|--------|-----------------|---------------|---------|----------------------|
|---------|---------------|--------|-----------------|---------------|---------|----------------------|



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Chain of Custody



6723 Tompsett Rd
Syracuse, NY 13214-0086
(315) 448-9120

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 2

Lab Work Order #

11594/947124/4542494-507

PROJ. NO. PROJECT NAME

85534

RAL DePue Site

COC Number

6

SAMPLERS: (Signature)

| SAMPLE ID | DATE | TIME | MATRIX | COMP. | GRAB | # Containers | Requested Analyses | | | | | | | Remarks |
|------------------------|----------|------|--------|-------|------|--------------|--------------------|---|---|---|---|---|---|---------------|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| OU4-SS-04-COMP1(0-1) | 6/3/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP1(1-6) | 6/3/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP1(6-12) | 6/3/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP2(0-1) | 6/3/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP2(1-6) | 6/3/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP2(12-18) | 6/3/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP3(0-1) | 6/3/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP3(1-6) | 6/3/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP4(0-1) | 6/2/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP4(1-6) | 6/2/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP5(1-6) | 6/2/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |
| OU4-SS-04-COMP5(12-18) | 6/2/2005 | 0:00 | SO | | | 1 | X | X | | | | | | ASBESTOS ONLY |

Requested Analyses

1. Metals
2. pH
- 3.
- 4.
- 5.
- 6.
- 7.

Special Instructions/ Comments:

☒ Special QA/QC Instructions

Laboratory Information and Receipt

Lab Name: Lancaster Laboratories

Shipping Tracking #

Specify Turnaround Requirements:

Sample Receipt:

☒ Cooler packed with ice

☒ Cooler custody seal intact

Condition/Cooler Temp:

| | | | | | |
|------------------------------|--------|------|------------------------------|------|------|
| Relinquished by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME |
| | 6-4-05 | 1:00 | | | |
| Relinquished by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME |
| | | | | | |
| Relinquished by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME |
| | | | | | |

| | | | | | |
|--------------------------|------|------|--------------------------|------|------|
| Received by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME |
| | | | | | |
| Received by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME |
| | | | | | |
| Received by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME |
| | | | | | |

6/13/05 08:00 /



CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Page 2 of 2

6723 Towpath Rd

Вулгасисо, NY 13214-0088

(315) 448-9120

11594/947124/4542494-507

PROJ. NO.

PROJECT NAME

85534

RAL DePue Sr.

COC Number

8

SAMPLERS: (Signature)

[illegible]

| Requested Analyses | | | | | | Special Instructions/ Comments: | | | | | |
|------------------------------|---------|--|--|--|--|--|------|--------------------------|------|------|------------------------------|
| 1. | Metalis | | | | | <input checked="" type="checkbox"/> Special QA/QC Instructions | | | | | |
| 2. | pH | | | | | | | | | | |
| 3. | | | | | | | | | | | |
| 4. | | | | | | | | | | | |
| 5. | | | | | | | | | | | |
| 6. | | | | | | | | | | | |
| 7. | | | | | | | | | | | |
| Relinquished by: (Signature) | | | | | | DATE | TIME | Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) |
| Relinquished by: (Signature) | | | | | | DATE | TIME | Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) |
| Relinquished by: (Signature) | | | | | | DATE | TIME | Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) |

DATA REVIEW FOR
DEPUE REMOVAL ACTION LIMIT (RAL) ASSESSMENT
DEPUE, ILLINOIS

SDG# DPU07
METALS ANALYSES

Analyses performed by:
Lancaster Laboratories, Inc.
Lancaster, Pennsylvania

Review performed by:



Blasland, Bouck & Lee, Inc.
Syracuse, New York
Summary

The following is an assessment of the data package for SDG# DPU07 for sampling from the RAL DePue Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

[illegible]

| | |
|---|--------------------------------------|
| 1 | MS/MSD analysis performed on sample. |
|---|--------------------------------------|

METALS ANALYSES

Introduction

Analyses were performed according to USEPA 6000/7000. Data were reviewed in accordance with USEPA National Functional Guidelines of February 1994.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

- U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.
- B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

- E The reported value is estimated due to the presence of interference.
- N Spiked sample recovery not within control limits.
- * Duplicate analysis not within control limits.

Validation qualifiers:

- J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
- UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for metals analyses is 180 days and for mercury is 28 days from sample receipt. Samples are required to be preserved at 4°C.

All samples were analyzed within the specified holding times.

Note: Sample temperatures were greater than the required preservation temperature of 4°C.

2. Blank Contamination

Quality assurance blanks, i.e., method or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

Several analytes were detected above the method detection limit in the method blank and/or the calibration blank. All associated sample results were greater than the blank action limit; therefore, none of the data were qualified.

Sodium was detected above the method detection limit in the associated rinse blank (RB060605-1) collected on 6/6/05 and associated with SDG#DPU05. All associated sample results were greater than the blank action limit; therefore, none of the data were qualified.

Several analytes were detected above the method detection limit in the associated rinse blank (RB060605-2) collected on 6/6/05 and associated with SDG#DPU05. All associated sample results were greater than the blank action limit; therefore, none of the data were qualified.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument continuing performance is satisfactory.

3.1 Initial Calibration

The correct number and type of standards were analyzed and all initial calibration verification standard recoveries were within control limits.

3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

3.3 CRDL Standard

All required analytes evaluated by the guidelines exhibited CRDL recoveries within the control limit with the exception of manganese and zinc. The CRDL standard of these analytes exhibited recoveries greater than the control limit. All associated sample locations exhibited concentrations greater than two times the reporting limit; therefore, none of the data were qualified due to this deviation.

3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

4. Matrix Spike/ Matrix Spike Duplicate (MS/MSD)/Laboratory Duplicate Analysis

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 MS/MSD Analysis

The MS recovery of copper exhibited a recovery greater than control limits. All associated sample results for copper were qualified as estimated.

4.2 Laboratory Duplicate Analysis

The laboratory duplicate results were within control limits.

5. Field Duplicate

No field duplicates were performed within this SDG.

6. Laboratory Control Sample (LCS)

LCS recoveries were within control limits.

7. Serial Dilution

Serial dilutions were within control limits.

8. Furnace QC

No furnace analyses were performed on the samples.

9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|--|-----|--|----|--|----|
| Data Completeness and Deliverables | | | | | |
| Is there a narrative or cover letter present? | X | | | | |
| Are the sample numbers included in the narrative? | X | | | | |
| Are the sample chain-of-custodies present? | X | | | | |
| Do the chain-of-custodies indicate any problems with sample receipt or sample condition? | X | | | | |
| Is the package paginated? | X | | | | |
| Are the forms and copies legible? | X | | | | |

| | | | | | |
|--|---|--|--|--|--|
| Form I to IX | | | | | |
| Are all the Form I through Form IX labeled with: | | | | | |
| Laboratory name? | X | | | | |
| Sample No.? | X | | | | |
| SDG No.? | X | | | | |
| Correct units? | X | | | | |
| Matrix? | X | | | | |

| | | | | | |
|--|---|--|--|--|---|
| Raw Data | | | | | |
| Is the digestion log for flame AA/ICP present? | X | | | | |
| Is the digestion log for furnace AA present? | | | | | X |
| Is the distillation log for mercury present? | | | | | X |
| Is the distillation log for cyanides present? | | | | | X |
| Are pH values listed? | | | | | |
| pH for metals analyses <2 (waters)? | | | | | X |
| pH for cyanide analyses >12 (waters)? | | | | | X |
| Percent solids calculation present for soils/sediments? | X | | | | |
| Are preparation dates present on sample preparation logs/bench sheets? | X | | | | |
| Are the measurement read out records present for: | | | | | |
| ICP | X | | | | |
| Flame AA | | | | | X |
| Furnace AA | | | | | X |
| Mercury | X | | | | |
| Cyanides | | | | | X |
| Is the data legible? | X | | | | |
| Is the data properly labeled? | X | | | | |
| | | | | | |
| Holding Times | | | | | |
| | X | | | | |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|--|-----|--|----|--|----|
| Were mercury analyses performed within 28 days? | | | | | |
| Were cyanide distillations performed within 14 days? | | | | | X |
| Were other metal analysis performed within 6 months? | X | | | | |

| | | | | | |
|--|---|--|--|--|--|
| <u>Form I (Final Data)</u> | | | | | |
| Are all forms complete? | X | | | | |
| Are correct units indicated on Form I's? | X | | | | |
| Are soil sample results for each parameter corrected for percent solids? | X | | | | |
| Are all "less than IDL" values properly coded with "U"? | X | | | | |
| Are the correct concentration qualifiers on Form I's? | X | | | | |
| Is a physical description of samples given on Form I's? | X | | | | |

| | | | | | |
|---|---|--|---|--|---|
| <u>Calibration</u> | | | | | |
| Is a record of at least 2 point calibration present for ICP analysis? | X | | | | |
| Is a record of 5 point calibration present for Hg analysis? | X | | | | |
| Is a record of 4 point calibration present for: | | | | | |
| Flame AA? | | | | | X |
| Furnace AA? | | | | | X |
| Cyanides? | | | | | X |
| Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses? | | | | | X |
| Is correlation coefficient less than .995 for: | | | | | |
| Mercury Analysis? | | | X | | |
| Cyanide Analysis? | | | | | X |
| Atomic Absorption Analysis? | | | | | X |

| | | | | | |
|---|---|--|--|--|---|
| <u>Form II A (Initial and Continuing Calibration Verification)</u> | | | | | |
| Present and complete for all analytes? | X | | | | |
| Are all calibration standards (initial and continuing) within control limits for: | | | | | |
| Metals (90-110%)? | X | | | | |
| Hg (80-120%)? | X | | | | |
| Cyanides (85-115%)? | | | | | X |
| Was continuing calibration performed every 10 samples or every 2 hours? | X | | | | |
| Was the ICV for cyanides distilled? | | | | | X |

| | | | | | |
|--|---|--|--|--|---|
| <u>Form II B (CRDL Standards for AA and ICP)</u> | | | | | |
| Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)? | X | | | | |
| Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis? | | | | | X |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|--|-----|--|----|--|----|
| Was a 2xCRDL (or 2xIDL when IDL>CRDL) standard (CRI) analyzed for each ICP run? | X | | | | |
| Was CRI analyzed after the ICV/ICB and before the final CCV/CCB, and twice every eight hours for each ICP run? | X | | | | |
| Are CRA and CRI standards within control limits for metals (70-130%)? | X | | | | |
| Is mid-range standard within control limits for cyanide (80-120%) | | | | | X |

| | | | | | |
|--|---|--|--|--|--|
| Form III (Initial and Continuing Calibration Blanks) | | | | | |
| Present and complete? | X | | | | |
| Was an initial calibration blank analyzed? | X | | | | |
| Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)? | X | | | | |
| Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)? | X | | | | |
| Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)? | X | | | | |

| | | | | | |
|---|---|--|---|--|--|
| Form III (Preparation Blank) | | | | | |
| Was one prep. blank analyzed for: | | | | | |
| each Sample Delivery Group SDG)? | X | | | | |
| each batch of digested samples? | X | | | | |
| each matrix type? | X | | | | |
| Is concentration of prep. blank value less than the CRDL (when IDL<CRDL)? | X | | | | |
| If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank? | X | | | | |
| Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)? | | | X | | |
| Is concentration of prep. blank below the negative CRDL? | | | X | | |

| | | | | | |
|--|---|--|--|--|---|
| Form IV (ICP Interference Check Sample) | | | | | |
| Present and complete? | X | | | | |
| Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)? | X | | | | |
| Are all ICS results inside the control limits ($\pm 20\%$)? | X | | | | |
| If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS? | | | | | X |

| | | | | | |
|---|---|--|---|--|--|
| Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation) | | | | | |
| Present and complete for: | | | | | |
| each SDG? | X | | | | |
| each matrix type? | X | | | | |
| Was field blank used for spiked sample? | | | X | | |
| | | | | | |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|---|-----|--|----|--|----|
| Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits (75-125)? | | | X | | |
| Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA? | | | | | X |
| <u>Aqueous</u> | | | | | |
| Are any spike recoveries: | | | | | |
| less than 30%? | | | | | X |
| between 30-74%? | | | | | X |
| between 126-150%? | | | | | X |
| greater than 150%? | | | | | X |
| <u>Soil/Sediment</u> | | | | | |
| Are any spike recoveries: | | | | | |
| less than 10%? | | | X | | |
| between 10-74%? | | | X | | |
| between 126-200%? | X | | | | |
| greater than 200%? | | | X | | |
| <u>Form VI (Lab Duplicates)</u> | | | | | |
| Present and complete for: | | | | | |
| each SDG? | X | | | | |
| each matrix type? | X | | | | |
| Was field blank used for duplicate analysis? | | | X | | |
| Are all values within control limits (RPD 20% or difference $\leq \pm$ CRDL)? | X | | | | |
| If no, are all results outside the control limits flagged with an * on Form I's and VI? | X | | | | |
| <u>Aqueous</u> | | | | | |
| Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL? | | | | | X |
| Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL? | | | | | X |
| <u>Soil/Sediment</u> | | | | | |
| Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) >35 %? | | | X | | |
| | | | | | |
| Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL? | | | X | | |
| <u>Field Duplicates</u> | | | | | |
| Were field duplicates analyzed? | | | X | | |
| <u>Aqueous</u> | | | | | |
| is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5xCRDL? | | | | | X |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|---|-----|--|----|--|----|
| Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5xCRDL? | | | | | X |
| <u>Soil/Sediment</u> | | | | | |
| Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%? | | | | | X |
| Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) > 2xCRDL? | | | | | X |

| | | | | | |
|--|---|--|---|--|---|
| <u>Form VII (Laboratory Control Sample)</u> | | | | | |
| Was one LCS prepared and analyzed for: | | | | | |
| each SDG? | X | | | | |
| each batch samples digested/distilled? | X | | | | |
| <u>Aqueous LCS</u> | | | | | |
| Is any LCS recovery: | | | | | X |
| less than 50%? | | | | | X |
| between 50% and 79%? | | | | | X |
| between 121% and 150%? | | | | | X |
| greater than 150%? | | | | | X |
| <u>Solid LCS</u> | | | | | |
| Is LCS "Found" value higher than the control limits? | | | X | | |
| Is LCS "Found" lower than the control limits? | | | X | | |

| | | | | | |
|---|---|--|---|--|--|
| <u>Form IX (ICP Serial Dilution)</u> | | | | | |
| Was Serial Dilution analysis performed for: | | | | | |
| each SDG? | X | | | | |
| each matrix type? | X | | | | |
| Was field blank(s) used for Serial Dilution Analysis? | | | X | | |
| Are results outside control limits flagged with an "E" on Form I's and Form IX when the initial concentration on Form IX is equal to 50 times IDL or greater. | | | X | | |
| Are any required % difference values: | | | | | |
| > 10%? | | | X | | |
| ≥100%? | | | X | | |

| | | | | | |
|---|--|--|--|--|---|
| <u>Furnace Atomic Absorption (AA) QC Analysis</u> | | | | | |
| Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA? | | | | | X |
| Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL? | | | | | X |
| Were dilutions analyzed for samples with analytical spike recovery less than 40%? | | | | | X |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|---|-----|--|----|--|----|
| Is analytical spike recovery outside the control limits (85-115%) for any sample? | | | | | X |

| | | | | | |
|---|--|--|--|--|---|
| Form VIII (Method of Standard Addition Results) | | | | | |
| Present? | | | | | X |
| If no, is any Form I result coded with "S" or "+"? | | | | | X |
| Was MSA required for any sample but not performed? | | | | | X |
| Is the coefficient of correlation for MSA less than 0.995 for any sample? | | | | | X |
| Is the coefficient of correlation for MSA less than 0.990 for any sample? | | | | | X |
| Was proper quantitation procedure followed? | | | | | X |

| | | | | | |
|---|--|--|--|--|---|
| Dissolved/Total for Inorganic/Total Analytes | | | | | |
| Were any analyses performed for dissolved as well as total analytes on the same sample. | | | | | X |
| Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if >CRDL) | | | | | X |
| Is the concentration of any dissolved analyte greater than its total concentration by more than 50%? | | | | | X |
| | | | | | |
| Field Blank | | | | | |
| Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes? | | | | | X |
| If no, was field blank value already rejected due to other QC criteria? | | | | | X |

| | | | | | |
|--|---|--|---|--|---|
| Form X, XI, XII (Verification of Instrumental Parameters) | | | | | |
| Is verification report present for : | | | | | |
| Instrument Detection Limits (quarterly)? | X | | | | |
| ICP Interelement Correlation Factors (annually)? | X | | | | |
| ICP Linear Ranges (quarterly)? | X | | | | |
| Is IDL greater than CRDL for any analyte? | | | X | | |
| If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL. | | | | | X |
| Was any sample result higher than the linear range of ICP. | | | X | | |
| Was any sample result higher than the highest calibration standard for non-ICP parameters? | | | X | | |
| If yes for any of the above, was the sample diluted to obtain the result on Form I? | | | | | X |

| | | | | | |
|---|--|--|---|--|--|
| Percent Solids | | | | | |
| Are the percent solids in soil/sediment(s): | | | | | |
| < 50%? | | | X | | |
| < 10%? | | | X | | |

Corrected Sample Analysis Data Sheets



Lancaster Laboratories Sample No. SW 4542508

OU4-SS-05-COMP1(0-1) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 13:59

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS511 SDG#: DPU07-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|---|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 9.03 | 1.08 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 7.3 | 0.50 | % | 1 |
| | "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | |
| 00394 | pH Code 067 | n.a. | 6.8 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|--------|------------------------|----------------------|-----------------|
| 06935 | Arsenic | SW-846 6010B | 1 | 06/17/2005 18:57 | John P Hook | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/15/2005 08:30 | William C Schwebel | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/15/2005 00:10 | Daniel S Smith | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 06/16/2005 19:45 | Annamaria Stipkovits | 1 |

0015



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Lancaster, PA 17605-2425
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Lancaster Laboratories Sample No. SW 4542509

OU4-SS-05-COMP1(1-6) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 13:59

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS512 SDG#: DPU07-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 10.3 | 1.04 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 3.8 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.7 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|--------|------------------------|----------------------|-----------------|
| 06935 | Arsenic | SW-846 6010B | 1 | 06/17/2005 19:02 | John P Hook | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/15/2005 08:30 | William C Schwebel | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/15/2005 00:10 | Daniel S Smith | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 06/16/2005 19:45 | Annamaria Stipkovits | 1 |

5511



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Lancaster Laboratories Sample No. SW 4542510

OU4-SS-05-COMP2(0-1) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 13:59

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS521 SDG#: DPU07-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 12.8 | 1.09 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 8.4 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.0 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|--------|------------------------|----------------------|-----------------|
| 06935 | Arsenic | SW-846 6010B | 1 | 06/17/2005 19:16 | John P Hook | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/15/2005 08:30 | William C Schwebel | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/15/2005 00:10 | Daniel S Smith | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 06/16/2005 19:45 | Annamaria Stipkovits | 1 |

0012



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Lancaster Laboratories Sample No. SW 4542511

OU4-SS-05-COMP2(1-6) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 13:59

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS522 SDG#: DPU07-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.149 | 0.106 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 7,890. | 21.2 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 39,900. | 31.7 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 14,000. | 21.2 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 22,800. | 26.5 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,540. | 52.9 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 178. | 106. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.06 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 26.8 | 1.06 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.06 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.35 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 2,400. | 10.6 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.759 | 0.317 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 14.0 | 2.12 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 30.8 | 4.23 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.68 | 5.29 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 39.2 | 4.23 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 179. | 10.6 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 439. | 2.12 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 14.2 | 5.29 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.359 J | 2.12 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 20.0 | 2.12 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 1,280. | 10.6 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 5.5 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.4 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Analysis Trial# | Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|-----------------|---------------|---------|-----------------|
|---------|---------------|--------|-----------------|---------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4542512

OU4-SS-05-COMP2(6-12) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 13:59

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS523 SDG#: DPU07-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 16.9 | 1.06 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 5.3 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.6 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|--------|------------------------|----------------------|-----------------|
| 06935 | Arsenic | SW-846 6010B | 1 | 06/17/2005 19:25 | John P Hook | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/15/2005 08:30 | William C Schwebel | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/15/2005 00:45 | Daniel S Smith | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 06/16/2005 19:45 | Annamaria Stipkovits | 1 |

6615



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Lancaster Laboratories Sample No. SW 4542513

OU4-SS-05-COMP3(1-6) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 13:59

Discard: 07/31/2005

Account Number: 11594

Blasland, Bouck & Lee

6723 Towpath Road, Box 66

Syracuse NY 13214-0066

SS531 SDG#: DPU07-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.109 | 0.106 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 9,570. | 21.3 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 33,000. | 31.9 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 14,600. | 21.3 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 20,600. | 26.6 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,940. | 53.1 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 132. | 106. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.00 J | 1.06 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 9.01 | 1.06 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.06 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.38 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 2,440. | 10.6 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.571 | 0.319 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 14.7 | 2.13 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 21.0 | 4.25 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.12 | 5.31 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 26.5 J | 4.25 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 123. | 10.6 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 506. | 2.13 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 16.2 | 5.31 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.381 J | 2.13 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 23.3 | 2.13 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 1,350. | 10.6 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 5.9 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 7.4 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4542514

OU4-SS-05-COMP3(6-12) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 13:59

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS532 SDG#: DPU07-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 7.59 | 1.05 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 5.1 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.6 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|--------|------------------------|----------------------|-----------------|
| 06935 | Arsenic | SW-846 6010B | 1 | 06/17/2005 19:34 | John P Hook | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/15/2005 08:30 | William C Schwebel | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/15/2005 00:45 | Daniel S Smith | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 06/16/2005 19:45 | Annamaria Stipkovits | 1 |

06/30/05



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Lancaster Laboratories Sample No. SW 4542515

OU4-SS-05-COMP4(0-1) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 13:59

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS541 SDG#: DPU07-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0950 J | 0.114 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 8,480. | 22.8 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 5,740. | 34.2 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 14,100. | 22.8 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,840. | 28.5 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,600. | 57.1 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 83.3 J | 114. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.14 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 8.20 | 1.14 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.14 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.85 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 3,970. | 11.4 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.452 | 0.342 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 19.6 | 2.28 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 22.3 | 4.57 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.20 | 5.71 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 34.2 J | 4.57 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 1,080. | 11.4 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 450. | 2.28 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 14.6 | 5.71 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.552 J | 2.28 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 22.7 | 2.28 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,470. | 11.4 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 12.4 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.6 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4542516

OU4-SS-06-COMP1(1-6) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 13:59

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS611 SDG#: DPU07-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0719 J | 0.106 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 10,700. | 21.3 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 5,190. | 31.9 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 24,200. | 21.3 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,600. | 26.6 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,630. | 53.2 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 60.1 J | 106. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.10 | 1.06 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 15.0 | 1.06 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.06 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.39 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 1,960. | 10.6 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 0.825 | 0.319 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 37.5 | 2.13 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 20.3 | 4.26 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.73 | 5.32 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 49.9 | 4.26 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 252. | 10.6 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 774. | 2.13 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 20.1 | 5.32 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.906 J | 2.13 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.9 | 2.13 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 4,050. | 10.6 | mg/kg | 10 |
| 00111 | Moisture Code 086 | n.a. | 6.1 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.2 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



Lancaster Laboratories, Inc.
2425 New Holland Pike
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Lancaster Laboratories Sample No. SW 4542517

OU4-SS-06-COMP2(1-6) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 14:00

Discard: 07/31/2005

Blasland, Bouck & Lee

6723 Towpath Road, Box 66

Syracuse NY 13214-0066

SS621 SDG#: DPU07-10

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0837 J | 0.106 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 10,400. | 21.2 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 3,900. | 31.8 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 20,600. | 21.2 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,210. | 26.5 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,640. | 53.1 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 41.7 J | 106. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.06 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 14.3 | 1.06 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.09 | 1.06 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.37 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 2,490. | 10.6 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 0.754 | 0.318 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 37.5 | 2.12 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 17.4 | 4.25 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.22 | 5.31 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 52.0 J | 4.25 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 326. | 10.6 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 788. | 2.12 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 17.5 | 5.31 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.25 J | 2.12 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.5 | 2.12 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 4,130. | 10.6 | mg/kg | 10 |
| 00111 | Moisture Code 086 | n.a. | 5.8 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.1 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



Lancaster Laboratories, Inc.
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Lancaster Laboratories Sample No. SW 4542518

OU4-SS-06-COMP3(1-6) Soil Sample

RAL DePue Site

Collected: 06/06/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 14:00

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS631 SDG#: DPU07-11

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0704 J | 0.108 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 11,700. | 21.6 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 7,940. | 32.3 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 20,100. | 21.6 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,840. | 26.9 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,960. | 53.9 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 50.4 J | 108. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.29 | 1.08 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 13.6 | 1.08 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.08 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.47 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 2,740. | 10.8 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 0.836 | 0.323 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 56.4 | 2.16 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 19.1 | 4.31 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.64 | 5.39 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 60.4 J | 4.31 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 281. | 10.8 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 711. | 2.16 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 18.7 | 5.39 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.26 J | 2.16 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.4 | 2.16 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 4,250. | 10.8 | mg/kg | 10 |
| 00111 | Moisture Code 086 | n.a. | 7.2 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.1 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4542519

OU4-SS-06-COMP4(1-6) Soil Sample

RAL DePue Site

Collected: 06/07/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 14:00

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS641 SDG#: DPU07-12

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.125 | 0.106 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 13,300. | 21.3 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 9,200. | 31.9 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 24,800. | 21.3 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,580. | 26.6 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,950. | 53.1 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 127. | 106. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.29 | 1.06 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 15.4 | 1.06 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.06 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.38 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 1,680. | 10.6 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 1.15 | 0.319 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 38.4 | 2.13 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 24.1 | 4.25 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 11.0 | 5.31 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 55.7 | 4.25 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 287. | 10.6 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 855. | 2.13 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 23.1 | 5.31 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.07 J | 2.13 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.9 | 2.13 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,960. | 10.6 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 5.9 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.5 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4542520

OU4-SS-06-COMP5(6-12) Soil Sample

RAL DePue Site

Collected: 06/07/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 14:00

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS651 SDG#: DPU07-13

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0524 J | 0.114 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 10,500. | 22.8 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 3,830. | 34.2 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 26,400. | 22.8 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,290. | 28.5 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,560. | 57.1 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 135. | 114. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.23 | 1.14 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 13.0 | 1.14 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.14 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.85 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 252. | 11.4 | mg/kg | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.06 | 0.342 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 16.8 | 2.28 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 21.6 | 4.57 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.48 | 5.71 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 34.5 J | 4.57 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 134. | 11.4 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 628. | 2.28 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 20.7 | 5.71 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.326 J | 2.28 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.2 | 2.28 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,160. | 11.4 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 12.4 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.3 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4542521

OU4-SS-07-COMP1(1-6) Soil Sample

RAL DePue Site

Collected: 06/07/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 14:00

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS711 SDG#: DPU07-14

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.114 | 0.105 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 9,660. | 21.1 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 13,600. | 31.6 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 18,800. | 21.1 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,790. | 26.4 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,930. | 52.7 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 135. | 105. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.20 | 1.05 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 14.3 | 1.05 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.05 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.33 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 6,030. | 10.5 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 1.20 | 0.316 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 42.3 | 2.11 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 16.8 | 4.22 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.19 | 5.27 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 69.6 | 4.22 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 404. | 10.5 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 586. | 2.11 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 19.0 | 5.27 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.77 | 2.11 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 26.8 | 2.11 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 4,100. | 10.5 | mg/kg | 10 |
| 00111 | Moisture Code 086 | n.a. | 5.2 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 7.2 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4542522

OU4-SS-07-COMP2(6-12) Soil Sample

RAL DePue Site

Collected: 06/07/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Blasland, Bouck & Lee

Reported: 06/30/2005 at 14:00

6723 Towpath Road, Box 66

Discard: 07/31/2005

Syracuse NY 13214-0066

SS721 SDG#: DPU07-15

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.102 J | 0.105 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 10,300. | 21.0 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 11,600. | 31.5 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 17,100. | 21.0 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,810. | 26.3 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,880. | 52.6 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 135. | 105. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.10 | 1.05 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 9.56 | 1.05 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.05 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.31 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 1,090. | 10.5 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.875 | 0.315 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 6.39 | 2.10 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 17.0 | 4.21 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.86 | 5.26 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 29.7 J | 4.21 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 182. | 10.5 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 472. | 2.10 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 17.7 | 5.26 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.652 J | 2.10 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 26.5 | 2.10 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 1,120. | 10.5 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 4.9 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 7.9 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
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Lancaster Laboratories Sample No. SW 4542523

OU4-SS-07-COMP4(1-6) Soil Sample

RAL DePue Site

Collected: 06/07/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 14:00

Discard: 07/31/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

SS741 SDG#: DPU07-16

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0946 J | 0.123 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 8,550. | 24.5 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 39,500. | 36.8 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 14,800. | 24.5 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 11,200. | 30.7 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 2,320. | 61.3 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 125. | 123. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.23 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 11.2 | 1.23 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.23 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 7.36 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 4,760. | 12.3 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 0.668 | 0.368 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 31.7 | 2.45 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 18.3 | 4.91 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.55 | 6.13 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 63.2 J | 4.91 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 265. | 12.3 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 516. | 2.45 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 15.8 | 6.13 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.29 J | 2.45 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 22.7 | 2.45 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,570. | 12.3 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 18.5 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.9 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | 8835 Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|----------------------|
|---------|---------------|--------|--------|------------------------|---------|----------------------|



Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681



Lancaster Laboratories Sample No. SW 4542524

OU4-SS-07-COMP5(1-6) Soil Sample

RAL DePue Site

Collected: 06/07/2005

Account Number: 11594

Submitted: 06/13/2005 08:50

Reported: 06/30/2005 at 14:00

Discard: 07/31/2005

Blasland, Bouck & Lee

6723 Towpath Road, Box 66

Syracuse NY 13214-0066

SS751 SDG#: DPU07-17*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.107 J | 0.114 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 10,400. | 22.7 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 13,900. | 34.1 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 16,300. | 22.7 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,590. | 28.4 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 2,030. | 56.8 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 109. J | 114. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.08 J | 1.14 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 10.6 | 1.14 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.16 | 1.14 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.81 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 3,570. | 11.4 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.725 | 0.341 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 45.3 | 2.27 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 19.5 | 4.54 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.42 | 5.68 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 52.1 J | 4.54 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 271. | 11.4 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 503. | 2.27 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 20.2 | 5.68 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.04 J | 2.27 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 26.3 | 2.27 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,750. | 11.4 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 11.9 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 7.1 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
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717-656-2300 Fax: 717-656-2681

Chain of Custody

8723 Towpath Rd

Syracuse, NY 13214-0088

(315) 446-8120

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

[illegible]

| Requested Analyses | | | | Special Instructions/ Comments: | | | |
|----------------------------------|------|------|--------------------------|--|------|--------------------------|--|
| 1. Metals | | | | Special QA/QC Instructions | | | |
| 2. pH | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| 6. | | | | Laboratory Information and Receipt | | | |
| 7. | | | | | | | |
| | | | | | | | |
| Lab Name: Lancaster Laboratories | | | | Sample Receipt: | | | |
| Shipping Tracking # | | | | <input checked="" type="checkbox"/> Cooler packed with ice | | | |
| Specify Turnaround Requirements: | | | | <input checked="" type="checkbox"/> Cooler custody seal intact | | | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME | Received by: (Signature) | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME | Received by: (Signature) | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME | Received by: (Signature) | |



6723 Towpath Rd
Syracuse, NY 13214-0086
(315) 446-9120

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

11594/947125/4542508-24

PROJECT NAME

85534

RAL DePue Site

COC Number

8

SAMPLERS: (Signature)

Requested Analyses

| SAMPLE ID | DATE | TIME | MATRIX | COMP. | GRAB | # Containers | 1 | 2 | 3 | 4 | 5 | 6 | 7 | HOLD | Remarks |
|-----------------------|----------|------|--------|-------|------|--------------|---|---|---|---|---|---|---|------|---------|
| OU4-SS-08-COMP1(1-6) | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | | |
| OU4-SS-08-COMP2(1-6) | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | | |
| OU4-SS-08-COMP3(1-6) | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | | |
| OU4-SS-08-COMP4(1-6) | 6/7/2005 | 0:00 | SO | | | 1 | X | X | | | | | | | |
| OU4-SS-08-COMP5(8-12) | 6/7/2005 | 0:00 | SO | | | 1 | X | X | | | | | | | |

| | | | | | |
|------------------------------|------|----------------------------------|--------------------------|--|------|
| Requested Analyses | | Special Instructions/ Comments: | | <input checked="" type="checkbox"/> Special QA/QC Instructions | |
| 1. Metals | | | | | |
| 2. pH | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | Lab Name: Lancaster Laboratories | | | |
| 6. | | Shipping Tracking # | | | |
| 7. | | Specify Turnaround Requirements: | | | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME |

| | | | |
|--|------|------------------------|--------------------------|
| Laboratory Information and Receipt | | Sample Receipt: | |
| <input checked="" type="checkbox"/> Cooler packed with ice | | Condition/Cooler Temp: | |
| <input checked="" type="checkbox"/> Cooler custody seal intact | | | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) |



BALANCE, SCALE & LEE, INC.
ANALYST, SCIENTIST, ECONOMIST

8723 Township Rd

Syracuse, NY 13214-0066

(315) 448-8120

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

11594/947125/4542508-24

PROJ. NO. PROJECT NAME

85534

RAL DePue Site

COC Number

9

SAMPLERS: (Signature)

Requested Analyses

| SAMPLE ID | DATE | TIME | MATRIX | COMP. | GRAB | # Containers | Requested Analyses | | | | | | | Remarks |
|-----------------------|----------|------|--------|-------|------|--------------|--------------------|---|---|---|---|---|---|---------|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| OU4-SS-07-COMP1(1-6) | 8/7/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |
| OU4-SS-07-COMP2(8-12) | 8/7/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |
| OU4-SS-07-COMP4(1-6) | 8/7/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |
| OU4-SS-07-COMP5(1-6) | 8/7/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |

Requested Analyses

| | | | | | | | | | |
|------------------------------|---------------------------------|------|--------------------------|------|----------------------------|------------------------------|------|------|--------------------------|
| 1. Metals | Special Instructions/ Comments: | | | | Special QA/QC Instructions | | | | |
| 2. pH | | | | | | | | | |
| 3. | | | | | | | | | |
| 4. | | | | | | | | | |
| 5. | | | | | | | | | |
| 6. | | | | | | | | | |
| 7. | | | | | | | | | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) |

DATA REVIEW FOR
DEPUE REMOVAL ACTION LIMIT (RAL) ASSESSMENT
DEPUE, ILLINOIS

SDG# DPU08
METALS ANALYSES

Analyses performed by:
Lancaster Laboratories, Inc.
Lancaster, Pennsylvania

Review performed by:



Blasland, Bouck & Lee, Inc.
Syracuse, New York
Summary

The following is an assessment of the data package for SDG# DPU08 for sampling from the RAL DePue Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

| Sample ID | Lab ID | Matrix | Sample Date | Analysis | | | | | |
|---------------------------|---------|--------|-------------|----------|------|-----|----------------|------|------|
| | | | | VOA | SVOC | PCB | MET | PEST | MISC |
| OU4-SS-08-COMP2(0-1) | 4544590 | Soil | 6/8/2005 | | | | X | | |
| OU4-SS-08-COMP3(0-1) | 4544591 | Soil | 6/8/2005 | | | | X | | |
| OU4-SS-08-COMP3(1-6) | 4544592 | Soil | 6/8/2005 | | | | X | | |
| OU4-SS-08-COMP4(0-1) | 4544593 | Soil | 6/8/2005 | | | | X | | |
| OU4-SS-09-COMP1(1-6) | 4544594 | Soil | 6/8/2005 | | | | X | | |
| OU4-SS-09-COMP2(1-6) | 4544595 | Soil | 6/8/2005 | | | | X | | |
| OU4-SS-09-COMP3(6-12) | 4544596 | Soil | 6/8/2005 | | | | X | | |
| OU4-SS-09-COMP4(1-6) | 4544597 | Soil | 6/9/2005 | | | | X | | |
| OU4-SS-09-COMP5(1-6) | 4544598 | Soil | 6/9/2005 | | | | X | | |
| OU4-SS-10-10(1-6) | 4544599 | Soil | 6/9/2005 | | | | X | | |
| OU4-SS-10-COMP1(0-1) | 4544600 | Soil | 6/9/2005 | | | | X | | |
| OU4-SS-10-COMP2(1-6) | 4544601 | Soil | 6/9/2005 | | | | X | | |
| OU4-SS-11-COMP1(1-6) | 4544602 | Soil | 6/9/2005 | | | | X | | |
| OU4-SS-11-COMP2(0-1) | 4544603 | Soil | 6/9/2005 | | | | X | | |
| OU4-SS-11-COMP3(12-18) | 4544604 | Soil | 6/9/2005 | | | | X ¹ | | |
| OU4-SS-14-12(1-6) | 4551776 | Soil | 6/14/2005 | | | | X | | |
| OU4-SS-14-18(1-6) | 4551777 | Soil | 6/14/2005 | | | | X | | |
| OU4-SS-14-19(0-1) | 4551778 | Soil | 6/14/2005 | | | | X ¹ | | |
| OU4-SS-15-17(1-6) | 4551782 | Soil | 6/14/2005 | | | | X | | |
| OU4-SS-DUP-7 ² | 4551783 | Soil | 6/14/2005 | | | | X | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

1 MS/MSD analysis performed on sample.

2 Sample ID OU4-SS-DUP-7 is the field duplicate of parent sample OU4-SS-14-12(1-6).

METALS ANALYSES

Introduction

Analyses were performed according to USEPA 6000/7000. Data were reviewed in accordance with USEPA National Functional Guidelines of February 1994.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

- U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.
- B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

- E The reported value is estimated due to the presence of interference.
- N Spiked sample recovery not within control limits.
- * Duplicate analysis not within control limits.

Validation qualifiers:

- J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
- UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for metals analyses is 180 days and for mercury is 28 days from sample receipt. Samples are required to be preserved at 4°C.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

Several analytes were detected above the method detection limit in the method blank and/or the calibration blank. All associated sample results were greater than the blank action limit; therefore, none of the data were qualified.

Zinc was detected above the method detection limit in the associated rinse blank (RB060805-1) collected on 6/8/05 and found in SDG#DPU05. All associated sample results were greater than the blank action limit; therefore, none of the data were qualified.

Manganese was detected above the method detection limit in the associated rinse blank (RB060905-2) collected on 6/9/05 and found in SDG#DPU05. All associated sample results were greater than the blank action limit; therefore, none of the data were qualified.

Calcium and Potassium were detected above the method detection limit in the associated rinse blank (RB061405-1) collected on 6/14/05 and found in SDG#DPU10. All associated sample results were greater than the blank action limit; therefore, none of the data were qualified.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument continuing performance is satisfactory.

3.1 Initial Calibration

The correct number and type of standards were analyzed and all initial calibration verification standard recoveries were within control limits.

3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

3.3 CRDL Standard

All required analytes evaluated by the guidelines exhibited CDRL recoveries within the control limit with the exception of silver and zinc. The CRDL standard of these analytes exhibited recoveries greater than the control limit. All associated sample locations exhibiting concentrations less than two times the detection limit were qualified as estimated.

3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

4. Matrix Spike/ Matrix Spike Duplicate (MS/MSD)/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 Matrix Spike / Matrix Spike Duplicate (MS/MSD)

The MS of barium associated with sample location OU4-SS-11-COMP3(12-18) exhibited a recovery below control limit. All sample results associated with barium were qualified as estimated.

The MSD of barium and mercury associated with of sample location OU4-SS-11-COMP3(12-18) exhibited recoveries greater than control limits. All sample results associated with barium and mercury were qualified as estimated.

The MS of copper associated with of sample location OU4-SS-14-19(0-1) exhibited a recovery below control limits. All sample results associated with copper were qualified as estimated.

The MS and/or MSD of chromium and potassium associated with sample location OU4-SS-14-19(0-1) exhibited recoveries greater than the control limits. All associated sample results were qualified as estimated.

4.2 Laboratory Duplicate

The relative percent difference (RPD) between laboratory duplicate analyses performed on sample location OU4-SS-14-19(0-1) exhibited a RPD greater than control limits associated with the analyte calcium. All associated sample results for calcium were qualified as estimated. All other associated laboratory duplicate RPDs were acceptable.

5. Field Duplicate

Results for duplicate samples are summarized as follows:

| Sample ID / Duplicate ID | Analyte | Sample Result | Duplicate Result | RPD |
|----------------------------------|-----------|---------------|------------------|-------|
| OU4-SS-14-12(1-6) / OU4-SS-DUP-7 | Aluminum | 8770 | 9530 | 8.3% |
| | Antimony | 1.03 | 1.44 | 33.2% |
| | Arsenic | 28.9 | 29.4 | 1.7% |
| | Barium | 4510 | 4280 | 5.2% |
| | Beryllium | 2.28 | 2.22 | 2.7% |
| | Cadmium | 30.6 | 27.6 | 10.3% |
| | Calcium | 19300 | 19700 | 2.1% |
| | Chromium | 15.9 | 16.6 | 4.3% |
| | Cobalt | 14.6 | 8.66 | 51.1% |
| | Copper | 77.1 | 138 | 56.6% |
| | Iron | 28900 | 29800 | 3.1% |
| | Lead | 517 | 469 | 9.7% |
| | Magnesium | 8170 | 8300 | 1.6% |
| | Manganese | 1370 | 626 | 74.5% |
| | Mercury | 0.214 | 0.223 | 4.1% |
| | Nickel | 32.8 | 22.8 | 36.0% |
| | Potassium | 1600 | 1650 | 3.1% |
| | Selenium | ND | ND | 0.0% |
| | Silver | 1.28 | 1.09 | 16.0% |
| | Sodium | 201 | 274 | 30.7% |
| | Thallium | 2.22 | 1.86 | 17.6% |
| | Vanadium | 24.9 | 27.8 | 11.0% |
| | Zinc | 3470 | 3140 | 10.0% |

ND not detected.

AC The field duplicate relative percent difference (RPD) is acceptable when the RPD between parent sample and field duplicate sample is less than two times the reporting limit (RL) and where the parent sample and/or duplicate concentration is less than five times RL.

The duplicate results are acceptable.

6. Laboratory Control Sample (LCS)

LCS recoveries were within control limits.

7. Serial Dilution

Serial dilutions were within control limits.

8. Furnace QC

No furnace analyses were performed on the samples.

9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|--|-----|--|----|--|----|
| Data Completeness and Deliverables | | | | | |
| Is there a narrative or cover letter present? | X | | | | |
| Are the sample numbers included in the narrative? | X | | | | |
| Are the sample chain-of-custodies present? | X | | | | |
| Do the chain-of-custodies indicate any problems with sample receipt or sample condition? | | | X | | |
| Is the package paginated? | X | | | | |
| Are the forms and copies legible? | X | | | | |

| | | | | | |
|--|---|--|--|--|--|
| Form I to IX | | | | | |
| Are all the Form I through Form IX labeled with: | | | | | |
| Laboratory name? | X | | | | |
| Sample No.? | X | | | | |
| SDG No.? | X | | | | |
| Correct units? | X | | | | |
| Matrix? | X | | | | |

| | | | | | |
|--|---|--|--|--|---|
| Raw Data | | | | | |
| Is the digestion log for flame AA/ICP present? | X | | | | |
| Is the digestion log for furnace AA present? | | | | | X |
| Is the distillation log for mercury present? | | | | | X |
| Is the distillation log for cyanides present? | | | | | X |
| Are pH values listed? | | | | | |
| pH for metals analyses <2 (waters)? | | | | | X |
| pH for cyanide analyses >12 (waters)? | | | | | X |
| Percent solids calculation present for soils/sediments? | X | | | | |
| Are preparation dates present on sample preparation logs/bench sheets? | X | | | | |
| Are the measurement read out records present for: | | | | | |
| ICP | X | | | | |
| Flame AA | | | | | X |
| Furnace AA | | | | | X |
| Mercury | X | | | | |
| Cyanides | | | | | X |
| Is the data legible? | X | | | | |
| Is the data properly labeled? | X | | | | |
| | | | | | |
| Holding Times | | | | | |
| Were mercury analyses performed within 28 days? | X | | | | |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|--|-----|--|----|--|----|
| Were cyanide distillations performed within 14 days? | | | | | X |
| Were other metal analysis performed within 6 months? | X | | | | |

| | | | | | |
|--|---|--|--|--|--|
| Form I (Final Data) | | | | | |
| Are all forms complete? | X | | | | |
| Are correct units indicated on Form I's? | X | | | | |
| Are soil sample results for each parameter corrected for percent solids? | X | | | | |
| Are all "less than IDL" values properly coded with "U"? | X | | | | |
| Are the correct concentration qualifiers on Form I's? | X | | | | |
| Is a physical description of samples given on Form I's? | X | | | | |

| | | | | | |
|---|---|--|---|--|---|
| Calibration | | | | | |
| Is a record of at least 2 point calibration present for ICP analysis? | X | | | | |
| Is a record of 5 point calibration present for Hg analysis? | X | | | | |
| Is a record of 4 point calibration present for: | | | | | |
| Flame AA? | | | | | X |
| Furnace AA? | | | | | X |
| Cyanides? | | | | | X |
| Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses? | | | | | X |
| Is correlation coefficient less than .995 for: | | | | | |
| Mercury Analysis? | | | X | | |
| Cyanide Analysis? | | | | | X |
| Atomic Absorption Analysis? | | | | | X |

| | | | | | |
|---|---|--|--|--|---|
| Form II A (Initial and Continuing Calibration Verification) | | | | | |
| Present and complete for all analytes? | X | | | | |
| Are all calibration standards (initial and continuing) within control limits for: | | | | | |
| Metals (90-110%)? | X | | | | |
| Hg (80-120%)? | X | | | | |
| Cyanides (85-115%)? | | | | | X |
| Was continuing calibration performed every 10 samples or every 2 hours? | X | | | | |
| Was the ICV for cyanides distilled? | | | | | X |

| | | | | | |
|--|---|--|--|--|---|
| Form II B (CRDL Standards for AA and ICP) | | | | | |
| Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)? | X | | | | |
| Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis? | | | | | X |
| | | | | | |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|--|-----|--|----|--|----|
| Was a 2xCRDL (or 2xIDL when IDL>CRDL) standard (CRI) analyzed for each ICP run? | X | | | | |
| Was CRI analyzed after the ICV/ICB and before the final CCV/CCB, and twice every eight hours for each ICP run? | X | | | | |
| Are CRA and CRI standards within control limits for metals (70-130%)? | | | X | | |
| Is mid-range standard within control limits for cyanide (80-120%) | | | | | X |

| | | | | | |
|--|---|--|---|--|--|
| Form III (Initial and Continuing Calibration Blanks) | | | | | |
| Present and complete? | X | | | | |
| Was an initial calibration blank analyzed? | X | | | | |
| Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)? | X | | | | |
| Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)? | | | X | | |
| Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)? | X | | | | |

| | | | | | |
|---|---|--|---|--|--|
| Form III (Preparation Blank) | | | | | |
| Was one prep. blank analyzed for: | | | | | |
| each Sample Delivery Group SDG)? | X | | | | |
| each batch of digested samples? | X | | | | |
| each matrix type? | X | | | | |
| Is concentration of prep. blank value less than the CRDL (when IDL≤CRDL)? | X | | | | |
| If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank? | X | | | | |
| Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)? | | | X | | |
| Is concentration of prep. blank below the negative CRDL? | | | X | | |

| | | | | | |
|--|---|--|--|--|---|
| Form IV (ICP Interference Check Sample) | | | | | |
| Present and complete? | X | | | | |
| Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)? | X | | | | |
| Are all ICS results inside the control limits (±20%)? | X | | | | |
| If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS? | | | | | X |

| | | | | | |
|---|---|--|---|--|--|
| Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation) | | | | | |
| Present and complete for: | | | | | |
| each SDG? | X | | | | |
| each matrix type? | X | | | | |
| Was field blank used for spiked sample? | | | X | | |
| Are all recoveries for analytes with sample concentrations less than four times the spike | | | X | | |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|---|-----|--|----|--|----|
| concentration within control limits (75-125)? | | | | | |
| Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA? | | | | | X |
| <u>Aqueous</u> | | | | | |
| Are any spike recoveries: | | | | | |
| less than 30%? | | | | | X |
| between 30-74%? | | | | | X |
| between 126-150%? | | | | | X |
| greater than 150%? | | | | | X |
| <u>Soil/Sediment</u> | | | | | |
| Are any spike recoveries: | | | | | |
| less than 10%? | | | X | | |
| between 10-74%? | X | | | | |
| between 126-200%? | X | | | | |
| greater than 200%? | X | | | | |
| <u>Form VI (Lab Duplicates)</u> | | | | | |
| Present and complete for: | | | | | |
| each SDG? | X | | | | |
| each matrix type? | X | | | | |
| Was field blank used for duplicate analysis? | | | X | | |
| Are all values within control limits (RPD 20% or difference $\leq \pm$ CRDL)? | | | X | | |
| If no, are all results outside the control limits flagged with an * on Form I's and VI? | X | | | | |
| <u>Aqueous</u> | | | | | |
| Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL? | | | | | X |
| Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL? | | | | | X |
| <u>Soil/Sediment</u> | | | | | |
| Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) >35 %? | X | | | | |
| | | | | | |
| Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL? | | | X | | |
| <u>Field Duplicates</u> | | | | | |
| Were field duplicates analyzed? | X | | | | |
| <u>Aqueous</u> | | | | | |
| is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5xCRDL? | | | | | X |
| | | | | | X |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|---|-----|--|----|--|----|
| Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5xCRDL? | | | | | |
| <u>Soil/Sediment</u> | | | | | |
| Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%? | | | X | | |
| Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) > 2xCRDL? | | | X | | |

| | | | | | |
|--|---|--|---|--|---|
| Form VII (Laboratory Control Sample) | | | | | |
| Was one LCS prepared and analyzed for: | | | | | |
| each SDG? | X | | | | |
| each batch samples digested/distilled? | X | | | | |
| <u>Aqueous LCS</u> | | | | | |
| Is any LCS recovery: | | | | | X |
| less than 50%? | | | | | X |
| between 50% and 79%? | | | | | X |
| between 121% and 150%? | | | | | X |
| greater than 150%? | | | | | X |
| <u>Solid LCS</u> | | | | | |
| Is LCS "Found" value higher than the control limits? | | | X | | |
| Is LCS "Found" lower than the control limits? | | | X | | |

| | | | | | |
|---|---|--|---|--|--|
| Form IX (ICP Serial Dilution) | | | | | |
| Was Serial Dilution analysis performed for: | | | | | |
| each SDG? | X | | | | |
| each matrix type? | X | | | | |
| | | | | | |
| Was field blank(s) used for Serial Dilution Analysis? | | | X | | |
| Are results outside control limits flagged with an "E" on Form I's and Form IX when the initial concentration on Form IX is equal to 50 times IDL or greater. | | | X | | |
| Are any required % difference values: | | | | | |
| > 10%? | | | X | | |
| ≥100%? | | | X | | |

| | | | | | |
|---|--|--|--|--|---|
| Furnace Atomic Absorption (AA) QC Analysis | | | | | |
| Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA? | | | | | X |
| Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL? | | | | | X |
| Were dilutions analyzed for samples with analytical spike recovery less than 40%? | | | | | X |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|---|-----|--|----|--|----|
| Is analytical spike recovery outside the control limits (85-115%) for any sample? | | | | | X |

| | | | | | |
|---|--|--|--|--|---|
| Form VIII (Method of Standard Addition Results) | | | | | |
| Present? | | | | | X |
| If no, is any Form I result coded with "S" or "+"? | | | | | X |
| Was MSA required for any sample but not performed? | | | | | X |
| Is the coefficient of correlation for MSA less than 0.995 for any sample? | | | | | X |
| Is the coefficient of correlation for MSA less than 0.990 for any sample? | | | | | X |
| Was proper quantitation procedure followed? | | | | | X |

| | | | | | |
|---|--|--|--|--|---|
| Dissolved/Total for Inorganic/Total Analytes | | | | | |
| Were any analyses performed for dissolved as well as total analytes on the same sample. | | | | | X |
| Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if >CRDL) | | | | | X |
| Is the concentration of any dissolved analyte greater than its total concentration by more than 50%? | | | | | X |
| | | | | | |
| Field Blank | | | | | |
| Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes? | | | | | X |
| If no, was field blank value already rejected due to other QC criteria? | | | | | X |

| | | | | | |
|--|---|--|---|--|---|
| Form X, XI, XII (Verification of Instrumental Parameters) | | | | | |
| Is verification report present for : | | | | | |
| Instrument Detection Limits (quarterly)? | X | | | | |
| ICP Interelement Correlation Factors (annually)? | X | | | | |
| ICP Linear Ranges (quarterly)? | X | | | | |
| Is IDL greater than CRDL for any analyte? | | | X | | |
| If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL. | | | | | X |
| Was any sample result higher than the linear range of ICP. | | | X | | |
| Was any sample result higher than the highest calibration standard for non-ICP parameters? | | | X | | |
| If yes for any of the above, was the sample diluted to obtain the result on Form I? | | | | | X |

| | | | | | |
|---|--|--|---|--|--|
| Percent Solids | | | | | |
| Are the percent solids in soil/sediment(s): | | | | | |
| < 50%? | | | X | | |
| < 10%? | | | X | | |

Corrected Sample Analysis Data Sheets



Lancaster Laboratories Sample No. SW 4544590

OU4-SS-08-COMP2(0-1) Soil Sample

RAL DePue Site

Collected: 06/08/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:35

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

08CO2 SDG#: DPU08-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0704 J | 0.110 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 11,300. | 22.0 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 9,520. | 33.0 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 16,400. | 22.0 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,360. | 27.5 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 2,440. | 54.9 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 84.5 J | 110. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.10 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 9.31 | 1.10 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.11 | 1.10 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.59 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 2,170. J | 11.0 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 0.638 | 0.330 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 52.7 | 2.20 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 18.0 | 4.40 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.61 | 5.49 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 62.6 | 4.40 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 285. | 11.0 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 537. | 2.20 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 17.6 | 5.49 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.14 J | 2.20 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.8 | 2.20 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 4,250. | 11.0 | mg/kg | 10 |
| 00111 | Moisture Code 086 | n.a. | 9.0 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 6.9 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Analysis Trial# | Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|-----------------|---------------|---------|-----------------|
|---------|---------------|--------|-----------------|---------------|---------|-----------------|



Lancaster Laboratories, Inc.
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Lancaster, PA 17605-2425
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Lancaster Laboratories Sample No. SW 4544591

OU4-SS-08-COMP3(0-1) Soil Sample

RAL DePue Site

Collected: 06/08/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:35

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

08C31 SDG#: DPU08-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.146 J | 0.115 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 9,910. | 23.0 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 9,530. | 34.4 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 21,000. | 23.0 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,370. | 28.7 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,830. | 57.4 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 87.0 J | 115. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.12 J | 1.15 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.5 | 1.15 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.82 | 1.15 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.89 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 8,260. J | 11.5 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 1.10 | 0.344 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 138. | 2.30 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 18.5 | 4.59 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.38 | 5.74 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 146. | 4.59 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 712. | 11.5 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 523. | 2.30 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 18.6 | 5.74 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 3.13 | 2.30 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 26.6 | 2.30 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 9,980. | 11.5 | mg/kg | 10 |
| 00111 | Moisture Code 086 | n.a. | 12.9 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.3 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Analysis Trial# | Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|-----------------|---------------|---------|-----------------|
| | | | | | SS18 | |



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Lancaster Laboratories Sample No. SW 4544592

OU4-SS-08-COMP3(1-6) Soil Sample

RAL DePue Site
Collected: 06/08/2005

Account Number: 11594

Submitted: 06/16/2005 09:00
Reported: 07/27/2005 at 11:35
Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

08C32 SDG#: DPU08-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.174 | 0.118 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 9,990. | 23.5 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 4,540. | 35.3 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 24,700. | 23.5 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,130. | 29.4 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,960. | 58.8 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 83.3 | 118. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.18 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 21.9 | 1.18 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.27 | 1.18 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 7.05 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 7,080. | 11.8 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 1.37 | 0.353 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 93.1 | 2.35 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 18.2 | 4.70 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.71 | 5.88 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 96.7 | 4.70 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 675. | 11.8 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 599. | 2.35 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 20.1 | 5.88 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 2.50 | 2.35 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.4 | 2.35 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 8,590. | 11.8 | mg/kg | 10 |
| 00111 | Moisture Code 086 | n.a. | 14.9 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 6.4 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Analysis Trial# | Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|-----------------|---------------|---------|-----------------|
| | | | | | GG26 | |



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Lancaster Laboratories Sample No. SW 4544593

OU4-SS-08-COMP4(0-1) Soil Sample

RAL DePue Site

Collected: 06/08/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:36

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

08C04 SDG#: DPU08-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.104 J | 0.118 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 10,900. | 23.6 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 12,500. | 35.4 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 27,700. | 23.6 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,270. | 29.5 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,800. | 59.0 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 129. | 118. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.18 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 10.1 | 1.18 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.34 | 1.18 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 7.08 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 1,400. J | 11.8 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 0.557 | 0.354 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 47.3 | 2.36 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 22.6 | 4.72 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 12.8 | 5.90 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 58.4 | 4.72 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 284. | 11.8 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 1,060. | 2.36 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 20.2 | 5.90 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.969 J | 2.36 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.3 | 2.36 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 3,320. | 11.8 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 15.2 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.5 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4544594

OU4-SS-09-COMP1(1-6) Soil Sample

RAL DePue Site

Collected: 06/08/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:36

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

09C01 SDG#: DPU08-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.157 J | 0.105 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 13,500. | 21.1 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 11,100. | 31.6 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 24,800. | 21.1 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,860. | 26.3 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 2,290. | 52.7 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 489. | 105. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.05 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 16.0 | 1.05 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.05 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.32 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 1,650. J | 10.5 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 1.21 | 0.316 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 23.5 | 2.11 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 20.4 | 4.21 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.30 | 5.27 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 57.8 | 4.21 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 232. | 10.5 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 583. | 2.11 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 22.3 | 5.27 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.855 J | 2.11 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.6 | 2.11 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,230. | 10.5 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 5.1 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.1 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
| | | | | | 6824 | |



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Page 1 of 2
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Lancaster Laboratories Sample No. SW 4544595

OU4-SS-09-COMP2(1-6) Soil Sample

RAL DePue Site

Collected:06/08/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:36

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

09CO2 SDG#: DPU08-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.333 | 0.108 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 11,500. | 21.6 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 7,720. | 32.4 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 24,600. | 21.6 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,880. | 27.0 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 2,210. | 54.1 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 188. | 108. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.08 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 24.5 | 1.08 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.23 | 1.08 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.49 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 2,510. | 10.8 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 1.22 | 0.324 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 37.7 | 2.16 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 21.0 | 4.32 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 10.9 | 5.41 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 60.3 | 4.32 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 306. | 10.8 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 923. | 2.16 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 24.9 | 5.41 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.952 | 2.16 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 32.8 | 2.16 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,690. | 10.8 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 7.5 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.1 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4544596

OU4-SS-09-COMP3(6-12) Soil Sample

RAL DePue Site

Collected: 06/08/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:36

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

09CO3 SDG#: DPU08-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.139 J | 0.108 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 9,120. | 21.5 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 10,100. | 32.3 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 18,400. | 21.5 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,190. | 26.9 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,800. | 53.8 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 67.7 J | 108. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.08 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 11.3 | 1.08 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.08 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.45 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 816. J | 10.8 | mg/kg | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.803 | 0.323 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 9.26 | 2.15 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 16.5 | 4.30 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.08 | 5.38 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 35.2 | 4.30 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 173. | 10.8 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 659. | 2.15 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 18.4 | 5.38 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.538 J | 2.15 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 25.7 | 2.15 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 1,550. | 10.8 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 7.0 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.2 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4544597

OU4-SS-09-COMP4(1-6) Soil Sample

RAL DePue Site

Collected: 06/09/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:36

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

09CO4 SDG#: DPU08-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0648 J | 0.110 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 9,630. | 22.0 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 7,660. | 33.0 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 17,900. | 22.0 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,670. | 27.5 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,580. | 55.1 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 44.8 J | 110. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.10 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 14.2 | 1.10 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.10 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.61 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 2,080. J | 11.0 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 0.698 | 0.330 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 30.6 | 2.20 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 16.5 | 4.41 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.38 | 5.51 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 48.9 | 4.41 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 270. | 11.0 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 723. | 2.20 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 17.2 | 5.51 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.917 J | 2.20 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.3 | 2.20 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,690. | 11.0 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 9.2 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.4 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
| | | | | | 0838 | |



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Lancaster Laboratories Sample No. SW 4544598

OU4-SS-09-COMP5(1-6) Soil Sample

RAL DePue Site

Collected: 06/09/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:36

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

09C05 SDG#: DPU08-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.198 | 0.113 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 9,840. | 22.7 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 6,470. | 34.0 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 19,700. | 22.7 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,880. | 28.3 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,670. | 56.6 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 50.0 | 113. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.13 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 16.7 | 1.13 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.13 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.80 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 3,280. | 11.3 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 0.839 | 0.340 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 40.7 | 2.27 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 17.8 | 4.53 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.33 | 5.66 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 63.6 | 4.53 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 434. | 11.3 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 720. | 2.27 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 18.2 | 5.66 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.23 | 2.27 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.6 | 2.27 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 3,150. | 11.3 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 11.7 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.2 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
| | | | | | 8832 | |



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Lancaster Laboratories Sample No. SW 4544599

OU4-SS-10-10(1-6) Soil Sample

RAL DePue Site

Collected: 06/09/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:36

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

10101 SDG#: DPU08-10

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.177 J | 0.113 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 10,500. | 22.6 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 14,700. | 33.9 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 18,100. | 22.6 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,640. | 28.3 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,880. | 56.6 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 103. J | 113. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.13 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 7.81 | 1.13 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.13 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.79 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 589. J | 11.3 | mg/kg | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.613 | 0.339 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 8.26 | 2.26 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 27.1 | 4.52 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.25 | 5.66 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 53.4 | 4.52 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 254. | 11.3 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 569. | 2.26 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 19.9 | 5.66 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.603 J | 2.26 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 25.8 | 2.26 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 671. | 11.3 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 11.6 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.1 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
| | | | | | 8834 | |



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Lancaster Laboratories Sample No. SW 4544600

OU4-SS-10-COMP1(0-1) Soil Sample

RAL DePue Site

Collected: 06/09/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:36

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

10CO1 SDG#: DPU08-11

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0933 J | 0.110 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 6,550. | 22.0 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 3,940. | 33.0 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 16,900. | 22.0 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 1,630. | 27.5 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 970. | 55.1 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 44.0 J | 110. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.10 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 13.9 | 1.10 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.10 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.61 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 1,500. J | 11.0 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.522 | 0.330 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 30.2 | 2.20 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 13.1 | 4.41 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.20 | 5.51 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 43.5 | 4.41 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 400. | 11.0 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 829. | 2.20 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 12.9 | 5.51 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.793 J | 2.20 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 20.1 | 2.20 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,710. | 11.0 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 9.2 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.4 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Analysis Trial# | Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|-----------------|---------------|---------|-----------------|
| | | | | | 8836 | |



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Lancaster Laboratories Sample No. SW 4544601

OU4-SS-10-COMP2(1-6) Soil Sample

RAL DePue Site

Collected: 06/09/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:36

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

10CO2 SDG#: DPU08-12

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.379 J | 0.110 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 7,270. | 22.0 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 6,070. | 33.0 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 16,800. | 22.0 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,060. | 27.5 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,060. | 54.9 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | N.D. | 110. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.10 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 14.8 | 1.10 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.35 | 1.10 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.59 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 1,950. J | 11.0 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.733 | 0.330 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 61.5 | 2.20 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 12.5 | 4.40 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.53 | 5.49 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 66.7 | 4.40 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 609. | 11.0 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 738. | 2.20 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 13.2 | 5.49 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.25 J | 2.20 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 20.9 | 2.20 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 3,230. | 11.0 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 9.0 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.6 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Analysis Trial# | Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|-----------------|---------------|---------|-----------------|
| | | | | | 6038 | |



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Lancaster Laboratories Sample No. SW 4544602

OU4-SS-11-COMPl(1-6) Soil Sample

RAL DePue Site

Collected: 06/09/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:36

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

11CO1 SDG#: DPU08-13

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.102 J | 0.109 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 12,700. | 21.8 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 12,200. | 32.8 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 24,800. | 21.8 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,290. | 27.3 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 2,280. | 54.6 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 52.0 J | 109. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.14 | 1.09 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 21.2 | 1.09 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.50 | 1.09 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.55 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 3,760. J | 10.9 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 0.873 | 0.328 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 88.7 | 2.18 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 20.3 | 4.37 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.86 | 5.46 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 108. | 4.37 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 464. | 10.9 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 893. | 2.18 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 18.9 | 5.46 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 2.11 J | 2.18 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.2 | 2.18 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 6,330. | 10.9 | mg/kg | 10 |
| 00111 | Moisture Code 086 | n.a. | 8.4 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 7.1 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4544603

OU4-SS-11-COMP2(0-1) Soil Sample

RAL DePue Site

Collected: 06/09/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:37

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

11CO2 SDG#: DPU08-14

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.115 J | 0.116 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 12,100. | 23.2 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 10,500. | 34.8 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 22,100. | 23.2 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,100. | 29.0 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 2,190. | 58.1 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 161. | 116. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.16 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 14.2 | 1.16 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.12 J | 1.16 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 6.97 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 2,260. J | 11.6 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.805 | 0.348 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 52.6 | 2.32 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 20.4 | 4.65 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.39 | 5.81 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 70.2 | 4.65 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 346. | 11.6 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 695. | 2.32 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 18.4 | 5.81 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.21 J | 2.32 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.8 | 2.32 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 3,530. | 11.6 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 13.9 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.3 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
| | | | | | 0842 | |



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Lancaster Laboratories Sample No. SW 4544604

OU4-SS-11-COMP3(12-18) Soil Sample

RAL DePue Site

Collected:06/09/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 07/27/2005 at 11:37

Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

11CO3 SDG#: DPU08-15

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.312 | 0.123 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 14,700. | 24.5 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 9,680. | 36.8 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 28,400. | 24.5 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,260. | 30.6 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 2,450. | 61.3 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 301. | 123. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.91 | 1.23 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 21.6 | 1.23 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | 1.31 | 1.23 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. | 7.35 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 688. | 12.3 | mg/kg | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.92 | 0.368 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 15.6 | 2.45 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 24.3 | 4.90 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.78 | 6.13 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 66.3 | 4.90 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 567. | 12.3 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 676. | 2.45 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 25.4 | 6.13 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.49 | 2.45 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.5 | 2.45 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 2,790. | 12.3 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 18.4 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.2 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
| | | | | | 0044 | |



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Lancaster Laboratories Sample No. SW 4551776

OU4-SS-14-12(1-6) Soil Sample
RAL DePue Site

Collected: 06/14/2005

Account Number: 11594

Submitted: 06/25/2005 09:30
Reported: 07/27/2005 at 11:33
Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

14-12 SDG#: DPU08-16

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.214 | 0.109 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 8,770. | 21.8 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 19,300. J | 32.8 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 28,900. | 21.8 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 8,170. | 27.3 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,600. J | 54.6 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 201. | 109. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 2.22 | 1.09 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 28.9 | 1.09 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.09 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | 1.03 J | 6.55 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 4,510. | 10.9 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 2.28 | 0.328 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 30.6 | 2.18 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 15.9 J | 4.37 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 14.6 | 5.46 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 77.1 J | 4.37 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 517. | 10.9 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 1,370. | 2.18 | mg/kg | 10 |
| 06961 | Nickel | 7440-02-0 | 32.8 | 5.46 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.28 J | 2.18 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 24.9 | 2.18 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 3,470. | 10.9 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 8.4 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.0 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster Laboratories Sample No. SW 4551777

OU4-SS-14-18(1-6) Soil Sample
RAL DePue Site

Collected: 06/14/2005

Account Number: 11594

Submitted: 06/25/2005 09:30
Reported: 07/27/2005 at 11:33
Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

14-18 SDG#: DPU08-17

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 15.7 | 1.14 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 12.6 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.9 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Analysis | | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|----------|------------------|------------------|-----------------|
| | | | Trial# | Date and Time | | |
| 06935 | Arsenic | SW-846 6010B | 1 | 07/05/2005 05:36 | Deborah A Krady | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/30/2005 18:52 | Scott W Freisher | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/28/2005 22:00 | Luz M Groff | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 07/04/2005 07:25 | Suzette L Lehman | 1 |

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Lancaster Laboratories Sample No. SW 4551778

OU4-SS-14-19(0-1) Unspiked Soil Sample
RAL DePue Site

Collected: 06/14/2005 10:30 by AB

Account Number: 11594

Submitted: 06/25/2005 09:30

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

Reported: 07/27/2005 at 11:33

Discard: 08/27/2005

14-19 SDG#: DPU08-18BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|---|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 20.7 | 1.24 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 19.2 | 0.50 | % | 1 |
| | "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | |
| 00394 | pH Code 067 | n.a. | 6.6 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|--------|------------------------|------------------|-----------------|
| 06935 | Arsenic | SW-846 6010B | 1 | 07/05/2005 05:12 | Deborah A Krady | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/30/2005 18:52 | Scott W Freisher | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/28/2005 22:40 | Luz M Groff | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 07/04/2005 07:25 | Suzette L Lehman | 1 |

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Lancaster Laboratories Sample No. SW 4551782

OU4-SS-15-17(1-6) Soil Sample
RAL DePue Site

Collected: 06/14/2005

Account Number: 11594

Submitted: 06/25/2005 09:30
Reported: 07/27/2005 at 11:33
Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

15-17 SDG#: DPU08-19

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|---|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 19.3 | 1.16 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 14.1 | 0.50 | % | 1 |
| | "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | |
| 00394 | pH Code 067 | n.a. | 7.1 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|--------|------------------------|------------------|-----------------|
| 06935 | Arsenic | SW-846 6010B | 1 | 07/05/2005 05:40 | Deborah A Krady | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/30/2005 18:52 | Scott W Freisher | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/28/2005 22:40 | Luz M Groff | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 07/04/2005 07:25 | Suzette L Lehman | 1 |

8855



Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681



Page 1 of 2
REVISED

Lancaster Laboratories Sample No. SW 4551783

OU4-SS-DUP-7 Soil Sample
RAL DePue Site

Collected: 06/14/2005

Account Number: 11594

Submitted: 06/25/2005 09:30
Reported: 07/27/2005 at 11:33
Discard: 08/27/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

DUP-7 SDG#: DPU08-20FD*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.223 | 0.110 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 9,530. | 21.9 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 19,700. J | 32.9 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 29,800. | 21.9 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 8,300. | 27.4 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,650. J | 54.8 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 274. | 110. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | 1.86 | 1.10 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 29.4 | 1.10 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.10 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | 1.44 J | 6.58 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 4,280. | 11.0 | mg/kg | 10 |
| 06947 | Beryllium | 7440-41-7 | 2.22 | 0.329 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 27.6 | 2.19 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 16.6 J | 4.39 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.66 | 5.48 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 138. J | 4.39 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 469. | 11.0 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 626. | 2.19 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 22.8 | 5.48 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.09 J | 2.19 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.8 | 2.19 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 3,140. | 11.0 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 8.8 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 7.2 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|------------------------|---------|-----------------|



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Lancaster, PA 17605-2425
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Chain of Custody



PROJ. NO.

SAMPLERS: (Signature)

RAL DePlus Site

COC Number

10

Page 1 of 1

Lab Work Order #

| | | | | | | | | | | | | | | | |
|-----------------------|----------------|----------|------|--------|-------|------|--------------|--------------------|---|---|------------|----|---|---|---------|
| 85534 | RAL DePue Site | | | | | | | | | | COC Number | | | | |
| SAMPLERS: (Signature) | | | | | | | | | | | | 10 | | | |
| SAMPLE ID | | DATE | TIME | MATRIX | COMP. | GRAB | # Containers | Requested Analyses | | | | | | | Remarks |
| | | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| U04-SS-08-COMP2(0-1) | | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | HOLD |
| U04-SS-08-COMP3(0-1) | | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |
| U04-SS-08-COMP3(1-6) | | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |
| U04-SS-08-COMP4(0-1) | | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |

| Requested Analysis | | Special Instructions/ Comments: | |
|------------------------------|--|---------------------------------|------|
| 1. Metals | | Special QA/QC Instructions | |
| 2. pH | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| Relinquished by: (Signature) | | DATE | TIME |
| Relinquished by: (Signature) | | DATE | TIME |
| Relinquished by: (Signature) | | DATE | TIME |



BLASLAND, BUCK & LEE, INC.
ANALYSTS, SCIENTISTS, ENGINEERS

8723 Towpath Rd

Syracuse, NY 13214-0046

(315) 448-8120

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

11594/947645/4544590-604

PROJ. NO. PROJECT NAME

85534

RAL DePue Site

COC Number

11

SAMPLERS: (Signature)

| SAMPLE ID | DATE | TIME | MATRIX | COMP. | GRAB | # Containers | Requested Analyses | | | | | | | Remarks |
|-----------------------|----------|------|--------|-------|------|--------------|--------------------|---|---|---|---|---|---|---------|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| OU4-SS-09-COMP1(1-8) | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |
| OU4-SS-09-COMP2(1-8) | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |
| OU4-SS-09-COMP3(8-12) | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |
| OU4-SS-09-COMP4(1-8) | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |
| OU4-SS-09-COMP5(1-8) | 6/8/2005 | 0:00 | SO | | | 1 | X | X | | | | | | |

| | | | | | |
|------------------------------------|-------------|--|--|---------------------------------------|-----------|
| Requested Analyses | | Special Instructions/ Comments: | | Special QA/QC Instructions | |
| 1. Metals | | | | | |
| 2. pH | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| Relinquished by: (Signature) | DATE 6/8/05 | TIME 1:20 | Relinquished by: (Signature) | DATE | TIME |
| Relinquished by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME |
| Relinquished by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE 6/16/05 | TIME 9:00 |
| | | | Relinquished by: (Signature) Kathy Binkley | | |
| Laboratory Information and Receipt | | | | | |
| Lab Name: Lancaster Laboratories | | Sample Receipt: | | | |
| Shipping Tracking # | | <input checked="" type="checkbox"/> Cooler packed with ice | | Condition/ Cooler Temp: intact / 3.30 | |
| Specify Turnaround Requirements: | | <input checked="" type="checkbox"/> Cooler custody seal intact | | Received by: (Signature) | |
| Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME |
| Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME |
| Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME |



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Syracuse, NY 13214-0066
(315) 446-9120

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

11594/947645/4544590-604

| | | | | | | | | | | | | | | | |
|-----------------------|----------------|------|------------|-------|------|---|--------------------|---|---|---|---|---|---|---------|--|
| PROJ. NO. | PROJECT NAME | | COC Number | | | | | | | | | | | | |
| 85534 | RAL DePue Site | | 12 | | | | | | | | | | | | |
| SAMPLERS: (Signature) | | | | | | | | | | | | | | | |
| SAMPLE ID | DATE | TIME | MATRIX | COMP. | GRAB | # | Requested Analyses | | | | | | | Remarks | |
| OU4-SS-10-10(1-6) | 6/9/2005 | 0:00 | SO | | | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | HOLD | |
| OU4-SS-10-COMP1(0-1) | 6/9/2005 | 0:00 | SO | | | 1 | | | | | | | | | |
| OU4-SS-10-COMP2(1-8) | 6/9/2005 | 0:00 | SO | | | 1 | | | | | | | | | |

| | | | | | |
|--------------------------------------|---------|--------------------------------|---|----------------------------|------|
| Requested Analyses | | Special Instructions/Comments: | | Special QA/QC Instructions | |
| 1. Metals | | | | | |
| 2. pH | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME |
| | 6/15/05 | 17:00 | | | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME |
| | | | | | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME |
| | | | | | |
| Lab Name: Lancaster Laboratories | | | Sample Receipt: | | |
| Shipping Tracking # | | | <input type="checkbox"/> Cooler packed with ice | | |
| Specify Turnaround Requirements: | | | <input type="checkbox"/> Cooler custody seal intact | | |
| Condition/Cooler Temp: Intact / 3.3° | | | | | |
| Relinquished by: (Signature) | | | Received by: (Signature) | | |
| Relinquished by: (Signature) | | | Received by: (Signature) | | |
| Relinquished by: (Signature) | | | Received by: (Signature) | | |
| | | | 9:00 | | |
| | | | Kathy Binkley | | |



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engineers, scientists, economists

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CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM





Page 1 of 1

Lab Work Order #

11594/947645/4544590-604

| | | | | | | | | | | | | | | | |
|------------------------|----------------|------|------------|-------|------|------------|--------------------|---|---|---|---|---|---|------|---------|
| PROJ. NO. | PROJECT NAME | | COC Number | | | | | | | | | | | | |
| 85534 | RAL DePue Site | | 13 | | | | | | | | | | | | |
| SAMPLERS: (Signature) | | | | | | | | | | | | | | | |
| SAMPLE ID | DATE | TIME | MATRIX | COMP. | GRAB | Containers | Requested Analyses | | | | | | | | |
| OU4-SS-11-COMP1(1-6) | 6/9/2005 | 0:00 | SO | | | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | HOLD | Remarks |
| OU4-SS-11-COMP2(0-1) | 6/9/2005 | 0:00 | SO | | | 1 | X | X | | | | | | | |
| OU4-SS-11-COMP3(12-18) | 6/9/2005 | 0:00 | SO | | | 1 | X | X | | | | | | | |

| | | | | | | | | | | | |
|------------------------------|--------|------|--------------------------|---------------------------------|------|------------------------------|------|----------------------------|--------------------------|--|--|
| Requested Analyses | | | | Special Instructions/ Comments: | | | | Special QA/QC Instructions | | | |
| 1. Metals | | | | | | | | | | | |
| 2. pH | | | | | | | | | | | |
| 3. | | | | | | | | | | | |
| 4. | | | | | | | | | | | |
| 5. | | | | | | | | | | | |
| 6. | | | | | | | | | | | |
| 7. | | | | | | | | | | | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | | |
| CS | 6/9-05 | 1:00 | CS | | | CS | | | Intact 13.3° | | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | | |
| CS | | | CS | | | CS | | | 6/9-05 | | |
| Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | DATE | TIME | Relinquished by: (Signature) | DATE | TIME | Received by: (Signature) | | |
| CS | | | CS | | | CS | | | Kathy Binkley | | |

| Requested Analyses | | Special Instructions/ Comments: | | Special QA/QC Instructions | |
|---|--|---------------------------------|------|---|--|
| 1. Aerobic | | | | | |
| 2. Metals | | | | | |
| 3. pH | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| Relinquished by: (Signature) | | DATE | TIME | Sample Receipt: | |
|  | | 6-25-05 | 0930 | Cooler packed with ice | |
| Relinquished by: (Signature) | | DATE | TIME | Cooler custody seal intact | |
|  | | | | Condition/Cooler Temp: intact 3.2° | |
| Relinquished by: (Signature) | | DATE | TIME | Received by: (Signature) | |
|  | | | | Received by: (Signature) | |
| Relinquished by: (Signature) | | DATE | TIME | Received by: (Signature) | |
|  | | 6-25-05 | 0930 | Received by: (Signature) Kathy Brinkman | |

Hcount# 11594 Group# 94872a Sample# 455177b-83



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CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

| PROJ. NO. | PROJECT NAME | | COC Number | | | | | | | | | | | |
|-----------------------|----------------|------|------------|-------|------|------------|--------------------|---|---|---|---|---|---|---------|
| 85534 | RAL DePue Site | | 27 | | | | | | | | | | | |
| SAMPLERS: (Signature) | | | | | | | | | | | | | | |
| SAMPLE ID | DATE | TIME | MATRIX | COMP. | GRAB | CONTAINERS | Requested Analyses | | | | | | | Remarks |
| OU4-SS-15-17(1-6) | 6/14/2005 | 0:00 | SO | | | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | HOLD |
| OU4-SS-15-08(0-1) | 6/14/2005 | 0:00 | SO | | | 1 | 1 | X | X | | | | | |

| Requested Analyses | | Special Instructions/ Comments: | |
|------------------------------|------|--|------|
| 1. Arsenic | | <input checked="" type="checkbox"/> Special QA/QC Instructions | |
| 2. pH | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| Relinquished by: (Signature) | | Relinquished by: (Signature) | |
| DATE | TIME | DATE | TIME |
| 6-14-05 | 0:00 | | |
| Relinquished by: (Signature) | | Relinquished by: (Signature) | |
| DATE | TIME | DATE | TIME |
| | | | |
| Relinquished by: (Signature) | | Relinquished by: (Signature) | |
| DATE | TIME | DATE | TIME |
| | | 6-25-05 | 0930 |
| Relinquished by: (Signature) | | Relinquished by: (Signature) | |
| | | Kathy Binkley | |

Laboratory Information and Receipt

Sample Receipt:

☒ Cooler packed with ice

☒ Cooler custody seal intact

Condition/Cooler Temp:

Intact / 3.2°

Received by: (Signature)

Received by: (Signature)

Received by: (Signature)

Lancaster Laboratories
Where quality is a science

For Lancaster Laboratories use only

Acc. # 11594 Group# 948972 Sample # 4551776-83

COC # 0089723

Please print. Instructions on reverse side correspond with circled numbers.

[illegible]

DATA REVIEW FOR
DEPUE REMOVAL ACTION LIMIT (RAL) ASSESSMENT
DEPUE, ILLINOIS

SDG# DPU09
METALS ANALYSES

Analyses performed by:
Lancaster Laboratories, Inc.
Lancaster, Pennsylvania

Review performed by:



Blasland, Bouck & Lee, Inc.
Syracuse, New York
Summary

The following is an assessment of the data package for SDG# DPU09 for sampling from the RAL DePue Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

[illegible]

- 1 MS/MSD analysis performed on sample.
2 Sample ID OU4-SS-DUP-8 is the field duplicate of parent sample OU4-SS-16-15(6-12).

METALS ANALYSES

Introduction

Analyses were performed according to USEPA 6000/7000. Data were reviewed in accordance with USEPA National Functional Guidelines of February 1994.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

Concentration (C) qualifiers:

- U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.
- B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

Quantitation (Q) qualifiers:

- E The reported value is estimated due to the presence of interference.
- N Spiked sample recovery not within control limits.
- * Duplicate analysis not within control limits.

Validation qualifiers:

- J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
- UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for metals analyses is 180 days and for mercury is 28 days from sample receipt. Samples are required to be preserved at 4°C.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

Sodium was detected in associated blanks. Associated sample results less than the blank action limit were qualified as nondetect.

Several analytes other than sodium were detected in the associated blanks. All associated sample results were greater than the blank action limit; therefore, none of the data were qualified.

Manganese was detected above the method detection limit in the associated rinse blank (RB061005-2) collected on 6/10/05 and found in SDG#DPU05. All associated sample results were greater than the blank action limit; therefore, none of the data were qualified.

Manganese and potassium were detected above the method detection limit in the associated rinse blank (RB061305-2) collected on 6/13/05 and found in SDG#DPU05. All associated sample results were greater than the blank action limit; therefore, none of the data were qualified.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument continuing performance is satisfactory.

3.1 Initial Calibration

The correct number and type of standards were analyzed and all initial calibration verification standard recoveries were within control limits.

3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

3.3 CRDL Standard

All required analytes evaluated by the guidelines exhibited CDRL recoveries within the control limit with the exception of nickel. The CRDL standard of this analyte exhibited recoveries greater than the control limit. All associated sample locations exhibited concentrations greater than two times the reporting limit; therefore, none of the data were qualified due to this deviation.

3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

4. Matrix Spike/ Matrix Spike Duplicate (MS/MSD)/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 Matrix Spike / Matrix Spike Duplicate (MS/MSD)

The MS/MSD of antimony exhibited recoveries less than control limits. All associated sample results for antimony were qualified as estimated.

The MS and/or MSD of copper, chromium and nickel exhibited recoveries greater than control limits. Copper and nickel sample results were qualified as estimated for associated sample location OU4-SS-13-03(6-12).

The relative percent difference (RPD) between the recoveries of MS/MSD associated with cobalt and nickel exhibited RPD greater than control limits. All associated sample results for cobalt and nickel were qualified as estimated.

4.2 Laboratory Duplicate

The relative percent difference (RPD) between laboratory duplicate analyses exhibited a RPD greater than control limits associated with the analyte copper. All associated sample results for calcium were qualified as estimated. All other associated laboratory duplicate RPDs were acceptable.

5. Field Duplicate

Results for duplicate samples are summarized as follows:

| Sample ID / Duplicate ID | Analyte | Sample Result | Duplicate Result | RPD |
|-----------------------------------|---------|---------------|------------------|------|
| OU4-SS-16-15(6-12) / OU4-SS-DUP-8 | Arsenic | 29.9 | 31.1 | 3.9% |

ND not detected.

AC The field duplicate relative percent difference (RPD) is acceptable when the RPD between parent sample and field duplicate sample is less than two times the reporting limit (RL) and where the parent sample and/or duplicate concentration is less than five times RL.

The duplicate results are acceptable.

6. Laboratory Control Sample (LCS)

LCS recoveries were within control limits.

7. Serial Dilution

Serial dilutions were within control limits.

8. Furnace QC

No furnace analyses were performed on the samples.

9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|--|-----|--|----|--|----|
| Data Completeness and Deliverables | | | | | |
| Is there a narrative or cover letter present? | X | | | | |
| Are the sample numbers included in the narrative? | X | | | | |
| Are the sample chain-of-custodies present? | X | | | | |
| Do the chain-of-custodies indicate any problems with sample receipt or sample condition? | | | X | | |
| Is the package paginated? | X | | | | |
| Are the forms and copies legible? | X | | | | |

| | | | | | |
|--|---|--|--|--|--|
| Form I to IX | | | | | |
| Are all the Form I through Form IX labeled with: | | | | | |
| Laboratory name? | X | | | | |
| Sample No.? | X | | | | |
| SDG No.? | X | | | | |
| Correct units? | X | | | | |
| Matrix? | X | | | | |

| | | | | | |
|--|---|--|--|--|---|
| Raw Data | | | | | |
| Is the digestion log for flame AA/ICP present? | X | | | | |
| Is the digestion log for furnace AA present? | | | | | X |
| Is the distillation log for mercury present? | | | | | X |
| Is the distillation log for cyanides present? | | | | | X |
| Are pH values listed? | | | | | |
| pH for metals analyses <2 (waters)? | | | | | X |
| pH for cyanide analyses >12 (waters)? | | | | | X |
| Percent solids calculation present for soils/sediments? | X | | | | |
| Are preparation dates present on sample preparation logs/bench sheets? | X | | | | |
| Are the measurement read out records present for: | | | | | |
| ICP | X | | | | |
| Flame AA | | | | | X |
| Furnace AA | | | | | X |
| Mercury | X | | | | |
| Cyanides | | | | | X |
| Is the data legible? | X | | | | |
| Is the data properly labeled? | X | | | | |
| | | | | | |
| Holding Times | | | | | |
| Were mercury analyses performed within 28 days? | X | | | | |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|--|-----|--|----|--|----|
| Were cyanide distillations performed within 14 days? | | | | | X |
| Were other metal analysis performed within 6 months? | X | | | | |

| | | | | | |
|--|---|--|--|--|--|
| Form I (Final Data) | | | | | |
| Are all forms complete? | X | | | | |
| Are correct units indicated on Form I's? | X | | | | |
| Are soil sample results for each parameter corrected for percent solids? | X | | | | |
| Are all "less than IDL" values properly coded with "U"? | X | | | | |
| Are the correct concentration qualifiers on Form I's? | X | | | | |
| Is a physical description of samples given on Form I's? | X | | | | |

| | | | | | |
|---|---|--|---|--|---|
| Calibration | | | | | |
| Is a record of at least 2 point calibration present for ICP analysis? | X | | | | |
| Is a record of 5 point calibration present for Hg analysis? | X | | | | |
| Is a record of 4 point calibration present for: | | | | | |
| Flame AA? | | | | | X |
| Furnace AA? | | | | | X |
| Cyanides? | | | | | X |
| Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses? | | | | | X |
| Is correlation coefficient less than .995 for: | | | | | |
| Mercury Analysis? | | | X | | |
| Cyanide Analysis? | | | | | X |
| Atomic Absorption Analysis? | | | | | X |

| | | | | | |
|---|---|--|--|--|---|
| Form II A (Initial and Continuing Calibration Verification) | | | | | |
| Present and complete for all analytes? | X | | | | |
| Are all calibration standards (initial and continuing) within control limits for: | | | | | |
| Metals (90-110%)? | X | | | | |
| Hg (80-120%)? | X | | | | |
| Cyanides (85-115%)? | | | | | X |
| Was continuing calibration performed every 10 samples or every 2 hours? | X | | | | |
| Was the ICV for cyanides distilled? | | | | | X |

| | | | | | |
|--|---|--|--|--|---|
| Form II B (CRDL Standards for AA and ICP) | | | | | |
| Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)? | X | | | | |
| Was a mid-range calibration verification standard distilled and analyzed for cyanide analysis? | | | | | X |
| Was a 2xCRDL (or 2xIDL when IDL>CRDL) standard (CRI) analyzed for each ICP run? | | | | | |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|--|-----|--|----|--|----|
| | X | | | | |
| Was CRI analyzed after the ICV/ICB and before the final CCV/CCB, and twice every eight hours for each ICP run? | X | | | | |
| Are CRA and CRI standards within control limits for metals (70-130%)? | | | X | | |
| Is mid-range standard within control limits for cyanide (80-120%) | | | | | X |

| | | | | | |
|--|---|--|--|--|--|
| Form III (Initial and Continuing Calibration Blanks) | | | | | |
| Present and complete? | X | | | | |
| Was an initial calibration blank analyzed? | X | | | | |
| Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)? | X | | | | |
| Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)? | X | | | | |
| Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)? | X | | | | |

| | | | | | |
|---|---|--|---|--|--|
| Form III (Preparation Blank) | | | | | |
| Was one prep. blank analyzed for: | | | | | |
| each Sample Delivery Group SDG)? | X | | | | |
| each batch of digested samples? | X | | | | |
| each matrix type? | X | | | | |
| Is concentration of prep. blank value less than the CRDL (when IDL≤CRDL)? | X | | | | |
| If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank? | X | | | | |
| Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)? | | | X | | |
| Is concentration of prep. blank below the negative CRDL? | | | X | | |

| | | | | | |
|--|---|--|--|--|---|
| Form IV (ICP Interference Check Sample) | | | | | |
| Present and complete? | X | | | | |
| Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)? | X | | | | |
| Are all ICS results inside the control limits (±20%)? | X | | | | |
| If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS? | | | | | X |

| | | | | | |
|---|---|--|---|--|--|
| Form V A (Spiked Sample Recovery - Pre-Digestion/Pre-Distillation) | | | | | |
| Present and complete for: | | | | | |
| each SDG? | X | | | | |
| each matrix type? | X | | | | |
| Was field blank used for spiked sample? | | | X | | |
| Are all recoveries for analytes with sample concentrations less than four times the spike | | | | | |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|---|-----|--|----|--|----|
| concentration within control limits (75-125)? | | | X | | |
| Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA? | | | | | X |
| <u>Aqueous</u> | | | | | |
| Are any spike recoveries: | | | | | |
| less than 30%? | | | | | X |
| between 30-74%? | | | | | X |
| between 126-150%? | | | | | X |
| greater than 150%? | | | | | X |
| <u>Soil/Sediment</u> | | | | | |
| Are any spike recoveries: | | | | | |
| less than 10%? | | | X | | |
| between 10-74%? | X | | | | |
| between 126-200%? | X | | | | |
| greater than 200%? | X | | | | |
| <u>Form VI (Lab Duplicates)</u> | | | | | |
| Present and complete for: | | | | | |
| each SDG? | X | | | | |
| each matrix type? | X | | | | |
| Was field blank used for duplicate analysis? | | | X | | |
| Are all values within control limits (RPD 20% or difference $\leq \pm$ CRDL)? | | | X | | |
| If no, are all results outside the control limits flagged with an * on Form I's and VI? | X | | | | |
| <u>Aqueous</u> | | | | | |
| Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL? | | | | | X |
| Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL? | | | | | X |
| <u>Soil/Sediment</u> | | | | | |
| Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) >35 %? | X | | | | |
| | | | | | |
| Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL? | | | X | | |
| <u>Field Duplicates</u> | | | | | |
| Were field duplicates analyzed? | X | | | | |
| <u>Aqueous</u> | | | | | |
| is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5xCRDL? | | | | | |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|---|-----|--|----|--|----|
| | | | | | X |
| Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5xCRDL? | | | | | X |
| <u>Soil/Sediment</u> | | | | | |
| Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%? | | | X | | |
| Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) > 2xCRDL? | | | X | | |

| | | | | | |
|--|---|--|---|--|---|
| <u>Form VII (Laboratory Control Sample)</u> | | | | | |
| Was one LCS prepared and analyzed for: | | | | | |
| each SDG? | X | | | | |
| each batch samples digested/distilled? | X | | | | |
| <u>Aqueous LCS</u> | | | | | |
| Is any LCS recovery: | | | | | X |
| less than 50%? | | | | | X |
| between 50% and 79%? | | | | | X |
| between 121% and 150%? | | | | | X |
| greater than 150%? | | | | | X |
| <u>Solid LCS</u> | | | | | |
| Is LCS "Found" value higher than the control limits? | | | X | | |
| Is LCS "Found" lower than the control limits? | | | X | | |

| | | | | | |
|---|---|--|---|--|--|
| <u>Form IX (ICP Serial Dilution)</u> | | | | | |
| Was Serial Dilution analysis performed for: | | | | | |
| each SDG? | X | | | | |
| each matrix type? | X | | | | |
| Was field blank(s) used for Serial Dilution Analysis? | | | X | | |
| Are results outside control limits flagged with an "E" on Form I's and Form IX when the initial concentration on Form IX is equal to 50 times IDL or greater. | | | X | | |
| Are any required % difference values: | | | | | |
| > 10%? | | | X | | |
| ≥100%? | | | X | | |

| | | | | | |
|---|--|--|--|--|---|
| <u>Furnace Atomic Absorption (AA) QC Analysis</u> | | | | | |
| Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA? | | | | | X |
| Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL? | | | | | X |

Inorganic Data Validation Checklist

| | YES | | NO | | NA |
|---|-----|--|----|--|----|
| Were dilutions analyzed for samples with analytical spike recovery less than 40%? | | | | | X |
| Is analytical spike recovery outside the control limits (85-115%) for any sample? | | | | | X |

| | | | | | |
|---|--|--|--|--|---|
| <u>Form VIII (Method of Standard Addition Results)</u> | | | | | |
| Present? | | | | | X |
| If no, is any Form I result coded with "S" or "+"? | | | | | X |
| Was MSA required for any sample but not performed? | | | | | X |
| Is the coefficient of correlation for MSA less than 0.995 for any sample? | | | | | X |
| Is the coefficient of correlation for MSA less than 0.990 for any sample? | | | | | X |
| Was proper quantitation procedure followed? | | | | | X |

| | | | | | |
|---|--|--|--|--|---|
| <u>Dissolved/Total for Inorganic/Total Analytes</u> | | | | | |
| Were any analyses performed for dissolved as well as total analytes on the same sample. | | | | | X |
| Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if >CRDL) | | | | | X |
| Is the concentration of any dissolved analyte greater than its total concentration by more than 50%? | | | | | X |
| | | | | | |
| <u>Field Blank</u> | | | | | |
| Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes? | | | | | X |
| If no, was field blank value already rejected due to other QC criteria? | | | | | X |

| | | | | | |
|--|---|--|---|--|---|
| <u>Form X, XI, XII (Verification of Instrumental Parameters)</u> | | | | | |
| Is verification report present for : | | | | | |
| Instrument Detection Limits (quarterly)? | X | | | | |
| ICP Interelement Correlation Factors (annually)? | X | | | | |
| ICP Linear Ranges (quarterly)? | X | | | | |
| Is IDL greater than CRDL for any analyte? | | | X | | |
| If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL. | | | | | X |
| Was any sample result higher than the linear range of ICP. | | | X | | |
| Was any sample result higher than the highest calibration standard for non-ICP parameters? | | | X | | |
| If yes for any of the above, was the sample diluted to obtain the result on Form I? | | | | | X |

| | | | | | |
|---|--|--|---|--|--|
| <u>Percent Solids</u> | | | | | |
| Are the percent solids in soil/sediment(s): | | | | | |
| < 50%? | | | X | | |
| < 10%? | | | X | | |

Corrected Sample Analysis Data Sheets



Lancaster Laboratories Sample No. SW 4544605

OU4-SS-12-COMP1(0-1) Soil Sample

RAL DePue Site

Collected: 06/10/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 08/04/2005 at 14:09

Discard: 09/04/2005

Blasland, Bouck & Lee

6723 Towpath Road, Box 66

Syracuse NY 13214-0066

12C01 SDG#: DPU09-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0267 J | 0.116 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 11,800. | 23.1 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 7,880. | 34.7 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 19,100. | 23.1 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,280. | 28.9 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,780. | 57.8 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 279. | 116. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.16 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 7.45 | 1.16 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.16 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. J | 6.94 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 632. | 11.6 | mg/kg | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.840 | 0.347 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 17.0 | 2.31 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 19.8 J | 4.62 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.90 | 5.78 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 27.9 J | 4.62 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 147. | 11.6 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 690. | 2.31 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 14.4 | 5.78 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.711 J | 2.31 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 29.0 | 2.31 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 1,650. | 11.6 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 13.5 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.7 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Analysis Trial# | Date and Time | Analyst | 8816 Dilution Factor |
|---------|---------------|--------|-----------------|---------------|---------|----------------------|
|---------|---------------|--------|-----------------|---------------|---------|----------------------|



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Lancaster, PA 17605-2425
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Lancaster Laboratories Sample No. SW 4544606

OU4-SS-12-COMP2(1-6) Soil Sample

RAL DePue Site
Collected: 06/10/2005

Account Number: 11594

Submitted: 06/16/2005 09:00
Reported: 08/04/2005 at 14:09
Discard: 09/04/2005Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

12CO2 SDG#: DPU09-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0763 J | 0.105 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 6,800. | 21.0 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 5,760. | 31.5 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 18,100. | 21.0 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,060. | 26.2 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,020. | 52.5 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 163. | 105. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.05 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 15.1 | 1.05 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.05 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | 2.63 J | 6.30 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 2,000. | 10.5 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.735 | 0.315 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 47.6 | 2.10 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 14.1 J | 4.20 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.10 J | 5.25 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 57.9 J | 4.20 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 297. | 10.5 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 576. | 2.10 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 14.2 | 5.25 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 1.31 J | 2.10 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 22.0 | 2.10 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 3,370. | 10.5 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 4.7 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 6.7 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | 8818 Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|----------------------|
|---------|---------------|--------|--------|------------------------|---------|----------------------|



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Lancaster Laboratories Sample No. SW 4544607

OU4-SS-12-COMP3(1-6) Soil Sample

RAL DePue Site
Collected: 06/10/2005

Account Number: 11594

Submitted: 06/16/2005 09:00
Reported: 08/04/2005 at 14:09
Discard: 09/04/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

12CO3 SDG#: DPU09-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|---------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.0639 J | 0.112 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 6,010. | 22.3 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 3,020. | 33.5 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 17,800. | 22.3 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 1,600. | 27.9 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 799. | 55.9 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 142. ND (142) | 112. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.12 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 10.9 | 1.12 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.12 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. J | 6.70 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 1,230. | 11.2 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.551 | 0.335 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 42.6 | 2.23 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 12.2 J | 4.47 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.01 J | 5.59 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 44.2 J | 4.47 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 313. | 11.2 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 693. | 2.23 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 12.6 | 5.59 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.995 J | 2.23 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 19.5 | 2.23 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 3,190. | 11.2 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 10.5 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 6.9 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | 8828 Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|----------------------|
|---------|---------------|--------|--------|------------------------|---------|----------------------|



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Lancaster Laboratories Sample No. SW 4544608

OU4-SS-13-COMP1(6-12) Soil Sample

RAL DePue Site
Collected: 06/13/2005

Account Number: 11594

Submitted: 06/16/2005 09:00
Reported: 08/04/2005 at 14:09
Discard: 09/04/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

13CO1 SDG#: DPU09-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.173 | 0.108 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 11,500. | 21.6 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 14,500. | 32.4 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 27,600. | 21.6 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,190. | 27.0 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,980. | 53.9 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 296. | 108. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.08 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 14.4 | 1.08 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.08 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. J | 6.47 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 693. | 10.8 | mg/kg | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.75 | 0.324 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 6.86 | 2.16 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 20.4 J | 4.31 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.10 | 5.39 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 30.2 J | 4.31 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 181. | 10.8 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 632. | 2.16 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 23.1 | 5.39 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.572 J | 2.16 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.7 | 2.16 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 821. | 10.8 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 7.3 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 7.5 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | 8822 Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|----------------------|
|---------|---------------|--------|--------|------------------------|---------|----------------------|



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Lancaster Laboratories Sample No. SW 4544609

OU4-SS-13-COMP2 (6-12) Soil Sample

RAL DePue Site

Collected: 06/13/2005

Account Number: 11594

Submitted: 06/16/2005 09:00

Reported: 08/04/2005 at 14:09

Discard: 09/04/2005

Blasland, Bouck & Lee

6723 Towpath Road, Box 66

Syracuse NY 13214-0066

13CO2 SDG#: DPU09-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---------|-------------------|------------|---------------|----------------------------|-------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.159 | 0.114 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 10,300. | 22.9 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 15,300. | 34.3 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 19,000. | 22.9 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 8,830. | 28.6 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,900. | 57.2 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 156. ND (195) | 114. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.14 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 8.62 | 1.14 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.14 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | N.D. J | 6.86 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 519. | 11.4 | mg/kg | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.953 | 0.343 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 3.69 | 2.29 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 17.5 J | 4.58 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.42 | 5.72 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 25.9 J | 4.58 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 115. | 11.4 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 487. | 2.29 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 18.1 | 5.72 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.430 J | 2.29 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 25.8 | 2.29 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 446. | 11.4 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 12.6 | 0.50 | % | 1 |

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

| | | | | | | |
|-------|-------------|------|-----|-------|------------|---|
| 00394 | pH Code 067 | n.a. | 7.8 | 0.010 | Std. Units | 1 |
|-------|-------------|------|-----|-------|------------|---|

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Analysis Trial# | Date and Time | Analyst | 8824 Dilution Factor |
|---------|---------------|--------|-----------------|---------------|---------|----------------------|
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Lancaster Laboratories Sample No. SW 4544610

OU4-SS-13-COMP3(0-1) Soil Sample

RAL DePue Site
Collected: 06/13/2005

Account Number: 11594

Submitted: 06/16/2005 09:00
Reported: 08/04/2005 at 14:10
Discard: 09/04/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

13CO3 SDG#: DPU09-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 00159 | Mercury | 7439-97-6 | 0.121 | 0.118 | mg/kg | 1 |
| 01643 | Aluminum | 7429-90-5 | 7,100. | 23.6 | mg/kg | 1 |
| 01650 | Calcium | 7440-70-2 | 21,100. | 35.3 | mg/kg | 1 |
| 01654 | Iron | 7439-89-6 | 16,100. | 23.6 | mg/kg | 1 |
| 01657 | Magnesium | 7439-95-4 | 10,900. | 29.4 | mg/kg | 1 |
| 01662 | Potassium | 7440-09-7 | 1,270. | 58.9 | mg/kg | 1 |
| 01667 | Sodium | 7440-23-5 | 288. | 118. | mg/kg | 1 |
| 06925 | Thallium | 7440-28-0 | N.D. | 1.18 | mg/kg | 1 |
| 06935 | Arsenic | 7440-38-2 | 7.78 | 1.18 | mg/kg | 1 |
| 06936 | Selenium | 7782-49-2 | N.D. | 1.18 | mg/kg | 1 |
| 06944 | Antimony | 7440-36-0 | 23.4 J | 7.07 | mg/kg | 1 |
| 06946 | Barium | 7440-39-3 | 1,340. | 11.8 | mg/kg | 5 |
| 06947 | Beryllium | 7440-41-7 | 0.774 | 0.353 | mg/kg | 1 |
| 06949 | Cadmium | 7440-43-9 | 24.9 | 2.36 | mg/kg | 1 |
| 06951 | Chromium | 7440-47-3 | 14.7 J | 4.71 | mg/kg | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.52 J | 5.89 | mg/kg | 1 |
| 06953 | Copper | 7440-50-8 | 46.1 J | 4.71 | mg/kg | 1 |
| 06955 | Lead | 7439-92-1 | 1,890. | 11.8 | mg/kg | 1 |
| 06958 | Manganese | 7439-96-5 | 486. | 2.36 | mg/kg | 1 |
| 06961 | Nickel | 7440-02-0 | 15.2 | 5.89 | mg/kg | 1 |
| 06966 | Silver | 7440-22-4 | 0.967 J | 2.36 | mg/kg | 1 |
| 06971 | Vanadium | 7440-62-2 | 20.1 | 2.36 | mg/kg | 1 |
| 06972 | Zinc | 7440-66-6 | 1,830. | 11.8 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 15.1 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.7 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | 8826 Dilution Factor |
|---------|---------------|--------|--------|------------------------|---------|----------------------|
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Lancaster Laboratories Sample No. SW 4551790

OU4-SS-14-20(0-1) Unspiked Soil Sample
RAL DePue Site

Collected: 06/14/2005

Account Number: 11594

Submitted: 06/25/2005 09:30
Reported: 07/20/2005 at 11:22
Discard: 08/20/2005Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

14-20 SDG#: DPU09-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 14.5 | 1.17 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 14.3 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.4 | 0.010 | Std. Units | 1 |

The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min.

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|--------|------------------------|------------------|-----------------|
| 06935 | Arsenic | SW-846 6010B | 1 | 07/06/2005 21:31 | Donna R Sackett | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/28/2005 17:45 | Scott W Freisher | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/28/2005 22:40 | Luz M Groff | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 07/06/2005 07:00 | Suzette L Lehman | 1 |

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Lancaster Laboratories Sample No. SW 4551794

OU4-SS-DUP-8 Soil Sample
RAL DePue Site

Collected: 06/15/2005

Account Number: 11594

Submitted: 06/25/2005 09:30
Reported: 07/20/2005 at 11:22
Discard: 08/20/2005

Blasland, Bouck & Lee
6723 Towpath Road, Box 66
Syracuse NY 13214-0066

DUP-8 SDG#: DPU09-08FD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Units | Dilution Factor |
|---|-------------------|------------|------------|----------------------------|------------|-----------------|
| 06935 | Arsenic | 7440-38-2 | 31.1 | 1.12 | mg/kg | 1 |
| 00111 | Moisture Code 086 | n.a. | 10.8 | 0.50 | % | 1 |
| "Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis. | | | | | | |
| 00394 | pH Code 067 | n.a. | 6.5 | 0.010 | Std. Units | 1 |
| The pH was performed on a 1:1 slurry (25 gms. of sample and 25 ml. of deionized water) after being tumbled for 30 min. | | | | | | |

Laboratory Chronicle

| CAT No. | Analysis Name | Method | Trial# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------------|-------------------------|--------|------------------------|----------------------|-----------------|
| 06935 | Arsenic | SW-846 6010B | 1 | 07/04/2005 12:10 | Deborah A Krady | 1 |
| 00111 | Moisture Code 086 | EPA 160.3 modified | 1 | 06/28/2005 17:45 | Scott W Freisher | 1 |
| 00394 | pH Code 067 | SW-846 9045C (modified) | 1 | 06/28/2005 22:40 | Luz M Groff | 1 |
| 05708 | SW SW846 ICP Digest | SW-846 3050B | 1 | 07/03/2005 19:15 | Annamaria Stipkovits | 1 |

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